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PGT/PG&E AND ALTAMONT
NATURAL GAS PIPELINE PROJECTS
FINAL
ENVIRONMENTAL IMPACT
STATEMENT

COMMENTS/RESPONSES

Federal Energy Regulatory Commission
Washington, D.C.

MAY 1991

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PGT/PG&E and Altamont Natural Gas Pipeline Projects Final Environmental Impact Statement

Comments/Responses

Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, D.C. 20426

May 1991

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[U.S. Department of Agriculture, Soil Conservation Service, Casper, Wyoming]

United States
Department of
Agriculture

Soil
Conservation
Service

Federal Building Room 3124
100 East B Street
Casper, Wyoming 82601

January 29, 1991

91 FEB -1 PM 2:40

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RE: DEIS - PGT/PG&E & Altamont
Natural Gas Pipeline Projects
Docket No. CP89-460-001
Docket No. CP-90-1375-000

Dear Ms. Cashell:

FAI-1 The Soil Conservation Service in Wyoming has no comment on the Draft Environmental Impact Statement for the PGT/PGE Expansion - Altamont Natural Gas Pipeline Projects.

We thank you for the opportunity to review and comment.

Sincerely,

FRANK S. DICKSON
State Conservationist

cc: Mr. Mark C. Kalpin (PGT/PG&E Expansion Project),
Mr. Laurence J. Sauter, Jr. (Altamont Project)

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

The Soil Conservation Service
is an agency of the
Department of Agriculture

FAI-1 Thank you for your comment letter.

FA-2

United States Department of the Interior
BUREAU OF RECLAMATION
Great Plains Region
P O. Box 36900
Billings, Montana 59107-6900

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IN REPLY REFER TO
GP-420

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ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

FEB [illegible] 91

Ms. Lois Cashell
Secretary, Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington DC 20426

Subject: Comments on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS), Docket No. CP90-1375-000 (EIS)

Dear Ms. Cashell:

FA2-1 We have reviewed your draft EIS and submit the following comments:

1. We suggest that the language on Table 1-4, Page 1-18, be amended as follows:

   a. Agency: U.S. Department of the Interior, Bureau of Reclamation.

   b. Permit/Authority: Review authority in consultation with BLM and applicant.

   c. Agency Action: Review construction, land use, and rehabilitation plans. Provide mitigating measures and stipulations to BLM to be included in the permit. Conduct onsite inspection prior to construction.

FA2-2 2. On page 6-37, we would like to see the section titled "FERC Staff Recommended Mitigation Measures for the Altamont Project" changed to "FERC Staff Environmental Commitments for the Altamont Project."

FA2-3 3. In reference to item 50 on page 6-38, the Bureau of Reclamation (Reclamation) will request a review of any plan for the control of noxious weeds on Reclamation land before such a plan is implemented. Any such plans should be forwarded to the Project Manager, Montana Projects Office, Bureau of Reclamation, P.O. Box 30137, Billings, Montana 59107-0137.

FA2-4 4. In regard to cultural resources addressed on page 4M-5, paragraph 1, and page 6-41, items 67 and 68, Reclamation reserves the right to make determinations of

---

[U.S. Department of the Interior, Bureau of Reclamation, Billings, Montana]

FA2-1 Comment accepted. See change to Table 1-4.

FA2-2 The FERC staff cannot make commitments for Altamont. We will, however, recommend that the mitigation measures in Chapter 6 of the FEIS be attached as conditions to any FERC certificate issued for Altamont's proposed project.

FA2-3 Thank you for your comment. The language of this recommendation specifically recognizes the role of federal land managing agencies in any plans to control noxious weeds on federal lands.

FA2-4 As lead Federal agency with jurisdiction over the undertaking, the FERC has a legal responsibility to comply with Section 106 of the National Historic Preservation Act. This includes evaluating historical significance, pursuant to 36 CFR Part 800.4(c), for the entire project. However, be assured that as part of the ongoing consultation with your office, as an interested party, the Bureau of Reclamation's (BOR) views on determinations of eligibility will be taken into account on lands administered by the BOR.

FA2-4 (cont.) eligibility for cultural resource sites on Reclamation lands. This requirement will be listed as a special stipulation on the permit issued by the Bureau of Land Management.

If you have any questions, please contact Mark Beatty (FTS 585-6423 or 406-657-6423) of this office.

Sincerely,

NEIL STESSMAN

Roger K. Patterson
Regional Director

cc: Mr. Laurence J. Sauter, Jr. (Altamont Project)
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington DC 20426

FA-4

[U.S. Department of the Interior, Bureau of Reclamation, Salt Lake City, Utah]

United States Department of the Interior
BUREAU OF RECLAMATION
UPPER COLORADO REGIONAL OFFICE
PO BOX 11568
SALT LAKE CITY, UTAH 84147

IN REPLY REFER TO:
UC-459

FEB 2 8 1991

Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE.
Washington DC 20426

Subject: Environmental Impact Statement, Altamont Gas Transmission Company, Docket No. CP90-1375-000, Seedskadee and Eden Projects, Wyoming (FERC EIS)

Dear Ms. Cashell:

We have reviewed your draft Environmental Impact Statement (EIS) for the Altamont Natural Gas Pipeline Project. The proposed route of the pipeline will cross withdrawn and fee lands acquired by the United States through the Bureau of Reclamation (Reclamation) for the Seedskadee and Eden Projects.

FA3-1 Reclamation offers no objection to the proposed route; however, as stated in a letter from Reclamation to you dated November 3,1989, copy enclosed, the pipeline project crosses several features of the Eden Project, such as the E-5AH, F-2D, Farson, F-24, F-27, E-6, and Westside laterals, F-10, F-3, W-6, and W-7, drains, Eden Canal, and the W-19 sublateral.

Additionally, as stated in the enclosed letter, it is imperative that the superintendent at Fontenelle Dam be contacted prior to any crossing of the Green River and features of the Seedskadee Project, and the Eden Valley Irrigation and Drainage District in Farson be contacted prior to any crossing of the Eden Project features.

The permit for the pipeline right-of-way will be issued under the authority of the 1920 Mineral Leasing Act, as amended by Public Law 93-153, dated November 16, 1973. Since the pipeline right-of-way crosses public land administered by the Bureau of Land Management (BLM), BLM, in concurrence with Reclamation, will issue the right-of-way permit for the use of the lands for the buried pipeline in the Seedskadee and Eden Projects.

Sincerely,

Larry Walker

FOR Roland Robison
Regional Director

Enclosure

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ANALYSIS BRANCH

FA3-1 Thank you for your comments. We have alerted the applicant that these features would be crossed, and that the individuals identified in your letter of November 3, 1989, be contacted prior to crossing these features.

cc: State Director, Bureau of Land Management, Wyoming State Office,
PO Box 1828, Cheyenne WY 82003

Ms. Salley Haverly, Bureau of Land Management, 1993 Dewar Drive,
Rock Springs WY 82901

Ms. Lauren O'Donnell
Project Manager
Federal Energy Regulatory Commission
825 North Capitol Street, NE.
Washington DC 20426

Office of Environmental Project Review (ER89/750)
18th and C Street, NW., Room 2340
Washington DC 20240

Mr. Tom Taliaferro
President
Eden Valley Irrigation and
Drainage District
PO Box 174
Farson WY 82932
(each w/encl)

Special Reports

FA-6

UC-457 NOV 9 1989

Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington DC 20426

Subject: Environmental Report, Altamont Gas Transportation Project, Seedskadee and Eden Projects, Wyoming (Environmental Report)

Dear Ms. Cashell:

The Bureau of Reclamation (Reclamation) recognizes that our comments will be received well beyond the comment period deadline. We, however, did not receive the Notice of Intent or the strip maps until after October 19, 1989. We hope that our comments will be of benefit.

The alignment of the pipeline crosses several withdrawn and one fee acquired section of the Seedskadee Project. Features of the Eden Project that will be affected will be the E-SAH, F-20, Farson, F-24, F-27, E-6, and Westside laterals; F-10, F-3, W-6, and W-7 drains; Eden Canal; and W-19 sublateral.

FA3-2 It will be imperative that the superintendent at Fontenelle Dam, and the Eden Valley Irrigation and Drainage District in Farson be contacted prior to any crossing of the Green River or the Eden Project features.

We would like to take this opportunity to clarify the jurisdictional responsibilities shared by Reclamation and the Bureau of Land Management (BLM). Reclamation has jurisdiction over the Eden Project lands except for grazing management and oil and gas concerns covered by the 1920 Mineral Leasing Act. BLM manages these resources under an agreement between the two agencies. The same holds true for the Seedskadee Project, except that BLM also manages recreation at Fontenelle Reservoir and the two campgrounds on the Green River downstream from the dam.

Although cultural resources, plant and animal species, historic trails, recreation, fisheries and others are discussed in the Altamont Environmental Impact Report (EIR), there is no supporting data to review. We do not feel we can adequately comment on these issues at this time.

FA3-2 See response to FA3-1.

We appreciate the opportunity to comment on Altamont's EIR. Once the Environmental Impact Report/Statement prepared by Federal Energy Regulatory Commission is completed we would appreciate receiving a copy for comment.

Any questions can be referred to Lorane Christensen, FTS 588-4100.

Sincerely,

FOR Roland Robison
Regional Director

cc: Ms. Lauren O'Donnell
Project Manager
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington DC 20426

Mr. Laurence J. Sauter
Project Manager
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington DC 20426

Office of Environmental Project Review (ER89/750)
Room 2340
18th and C Street, NW
Washington DC 20240

Mr. Tom Taliaferro
President
Eden Valley Irrigation and Drainage District
P.O. Box 174
Farson WY 82932

bc: Chief, Flaming Gorge Field Division, Dutch John UT
Attention: Gary D. Butterfield

bcc: UC-450, UC-430, UC-150, UC-457

WBR: LChristensen:kc:10/23/89:588-4100:CL.90.2

United States Department of the Interior

BUREAU OF RECLAMATION
MID-PACIFIC REGION
KLAMATH PROJECT
6600 WASHBURN WAY
KLAMATH FALLS, OREGON 97603-9365

TAKE PRIDE IN AMERICA

FA-8

[U.S. Department of the Interior, Bureau of Reclamation, Klamath Falls, Oregon]

IN REPLY REFER TO:

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KO-140

MAR 4 1991.

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ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Subject: Comments on the Draft Environmental Impact Statement (EIS) for the PGT/PG&E Expansion - Altomont Natural Gas Pipeline (EIS)

Dear Ms Cashell:

FA4-1 The Klamath Project of the Bureau of Reclamation does not object to the preliminary location of the pipeline. Our only concern at this time is the construction schedule. If it is necessary to cross one of the Project's irrigation canals, it must be accomplished during the non-irrigation season - usually between March 15 and October 15. Exact dates will depend upon local conditions affecting agricultural practices.

Please place us on your notification list for future information pertaining to the Environmental Impact Statement and pipeline construction.

Sincerely,

Robert J. Davis
Robert J. Davis
Acting Project Manager

cc: Mark C. Kalpin (PGT/PG&E Expansion Project)
Laurence J. Sauter, Jr. (Altamont Project)
(Both at same address as this letter)

FA4-1 Thank you for your comment. The staff's procedures in Appendix C-3 allow appropriate permitting agencies to expand or restrict the staff's recommended time window for construction in order to address site-specific circumstances.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333

February 28, 1991

[Department of Health and Human Services, Public Health Service, Centers for Disease Control, Atlanta, Georgia]

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Ms. Cashell:

We have completed our review of the Draft Environmental Impact Statement (DEIS) for PGT/PG&E and Altamont Natural Gas Pipeline Projects. We are responding on behalf of the U.S. Public Health Service.

FA5-1 We concur that construction across waterbodies and major rivers, particularly those with contaminated sediments, have the greatest potential for adverse water quality impacts. We were pleased to note that a clearly defined, standardized set of construction procedures for stream and wetland crossings have been developed in conjunction with other cooperating agencies. However, in order to protect groundwater resources which are vital for public and private supply systems, we believe the FERC recommendation to require the applicant to submit, for inclusion in the Final EIS, a groundwater monitoring plan that could identify community and private supply wells and springs located near the proposed route be implemented. In the event groundwater supplies were contaminated, emergency mitigation would be implemented, including provision of a temporary potable water source.

We believe other health related issues have been adequately addressed, and the mitigation measures described, including containment of contaminants such as fuels and lubricants, appear to be adequate and appropriate for the proposed action.

Thank you for the opportunity to review and comment on this document. Please insure that we are included on your mailing list to receive a copy of the Final EIS, and future EIS's which may indicate potential public health impact.

Sincerely yours,

Kenneth W. Holt, M.S.E.H.
Special Programs Group (F29)
Center for Environmental Health
and Injury Control

cc:
Mr. Mark C. Kalpin
Mr. Laurence J. Sauter, Jr.

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FA5-1 Thank your for your comments. The recommendation to file a groundwater monitoring plan prior to commencing pipeline construction has been retained in the FEIS.

[U.S. Army Corps of Engineers, Walla Walla, Washington]

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON 99362 9265

February 28, 1991

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ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

REPLY TO
ATTENTION OF
Operations Division

Ms. Lois Cashall, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Ms. Cashell:

This is in regard to the Draft Environmental Impact Statement for the PGT/PG&E and Altamont natural gas pipeline projects. This document has been reviewed as it relates to the Corps of Engineers' regulatory responsibilities under Section 10 of the Rivers and Harbors Act of 1899, and Section 404 of the Clean Water Act. The following comments are being supplied for your consideration.

FA6-1 a. The "Agency Action" sections of Table 1-4, page 1-17, associated with Section 404 permits should refer to "waters of the United States", not "navigable waters".

FA6-2 b. By admission on page 3E-2, the wetland identification technique used for the PGT portion of the Draft Environmental Impact Statement, tends to underestimate wetland areas. This could logically lead to an underestimation of impacts to wetlands. The Final Environmental Impact Statement should address the impacts to all wetlands, and therefore should not be completed until all wetland have been delineated, their functions and values determined, and the impacts to the wetlands assessed. This complete assessment of wetland impacts may eliminate the need for supplemental National Environmental Policy Act documentation related to wetlands during the review of Department of the Army permit applications.

FA6-3 c. The impacts to wetlands discussed on page 4E-12 should emphasize the fact that the wetland areas are underestimated unless the Final Environmental Impact Statement will address the impacts to exact wetland areas, and their functions and values, as determined in the field.

FA6-4 d. The mitigation measures for the Moyie River crossings discussed on page 4F-6 will require Department of the Army permits

FA6-1 See revised Table 1.4.

FA6-2 See revised Chapter 3E.

FA6-3 See revised Chapter 4E.

FA6-4 Thank you for this information.

FA6-4 (cont.) if they include discharges of dredged or fill material into waters of the United States. A statement to this effect should be included in this section.

If you should have any questions or need further information, please write or call Mr. Tim R. Erkel at (509) 522-6721.

Sincerely,

Paul F. Winborg
Chief, Operations Division

Copies Furnished:

Mr. Mark C. Kalpin
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

CP89-460-000

CP90-1375

FA-12

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF RECLAMATION
PACIFIC NORTHWEST REGION
FEDERAL BUILDING & US COURTHOUSE
BOX 043-550 WEST FORT STREET
BOISE, IDAHO 83724-0043

91 MAR -6 PM 4:02

IN REPLY REFER TO:
PN 150

FEB 28 1991

Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE.
Washington DC 20426

Subject: Review of Draft Environmental Impact Statement for Pacific Gas Transmission Company and Altamont Gas Transmission Company's Natural Gas Pipeline Projects; Idaho, Washington, Oregon, California, Montana, and Wyoming (ER 91/60) (Environmental Review)

Dear Ms. Cashell:

FA7-1 We have reviewed the subject document. Our only comment is a request that the parties involved in construction of the PGT/PG&E pipeline segment coordinate with the appropriate Bureau of Reclamation (Reclamation) offices in the Pacific Northwest Region when crossing Reclamation-administered lands. Crossing agreements, other permits, and site specific environmental evaluation may be required.

For your information, a portion (in the vicinity of Klamath Falls, Oregon) of the PGT/PG&E route is located in Reclamation's Mid-Pacific Region, headquartered in Sacramento, California. The major portion of the Altamont pipeline is located within Reclamation's Great Plains Region (Billings, Montana). The southwestern corner of Wyoming is in our Upper Colorado Region (Salt Lake City, Utah).

If you wish further information or assistance in determining the right contact points among Reclamation's Pacific Northwest Region offices, please let us know at the address above or by phone--Regional Environmental Officer, Douglas James, (208) 334-1207.

Thank you for the opportunity to review the draft environmental impact statement.

Sincerely,

Kenneth L. Pedde

Acting Regional Director

[U.S. Department of the Interior, Bureau of Reclamation, Boise, Idaho]

FA7-1 Thank you for your comments.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of the Chief Scientist
Washington, D.C. 20230

February 28, 1991

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Ms Cashell:

Enclosed are comments to the PGT/PG&E and Altamont Natural Gas Pipeline Project. We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Sincerely,

David Cottingham

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosure

cc: Mr. Mark C. Kalpin (PGT/PG&E Expansion Project)
Mr. Laurence J. Sauter, Jr. (Altamont Project)

UNITED STATES DEPARTMENT OF COMME
National Oceanic and Atmospheric Administra
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE MARYLAND 20852

FA-14

MEMORANDUM FOR: David Cottingham
Ecology and Environmental Conservation Office
Office of the Chief Scientist

FROM: Rear Admiral J. Austin Yeager, NOAA
Director, Charting and Geodetic Services

SUBJECT: DEIS 9101.12 - PGT/PG&E and Altamont Natural Gas Pipeline Project

The subject statement has been reviewed within the areas of Charting and Geodetic Services' (C&GS) responsibility and expertise and in terms of the impact of the proposed actions on C&GS activities and projects.

A preliminary review of C&GS records has indicated the presence of both horizontal (H) and vertical (V) geodetic control survey monuments in the proposed project area. Attached are the published geodetic control data for Idaho State Level Line 10 (V) and elevations and descriptions on magnetic tape for vertical control geodetic survey monuments in California between 36° & 38°30′ latitude, and 120° & 122° longitude. NAD 83 horizontal control positions for survey monuments in Idaho, Washington, Oregon, and California on computer diskettes are being forwarded.

FA8-1 This information should be reviewed for identifying the location and designation of any geodetic control monuments that may be affected by the proposed project. If there are any planned activities which will disturb or destroy these monuments, C&GS requires not less than 90 days' notification in advance of such activities in order to plan for their relocation.

C&GS recommends that funding for this project include the cost of any relocation required for C&GS monuments. For further information about these monuments, please contact the National Geodetic Information Branch, N/CG17, Rockwall Bldg., room 20, National Geodetic Survey Division, NOAA, Rockville, Maryland 20852, telephone 301-443-8631.

Attachment

cc: N/CG17 - J. Spencer
N/CG1x21 - L. Riggera
N/CG1x30 - B. Kelly
N/CG1x9 - J. D'Onofrio
N/CG1x22 - D. Wegenast

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EC

FA8-1 Thank you for your comments. We will alert the applicant to this information.

United States Department of Agriculture
Forest Service
Pacific Northwest Region
319 S.W. Pine Street
P.O. Box 3623
Portland, OR 97208-3623

[U.S. Department of Agriculture Forest Service, Portland, Oregon]

Reply To: 2720

Date: MAR 07 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Secretary:

Reference is made to Docket Nos. CP89-460-001 and CP90-1375-000.

The USDA Forest Service has reviewed the Draft Environmental Impact Statement (DEIS) for the PGT/PGE and Altamont Natural Gas Pipeline Projects. The following comments are provided for use and consideration when preparing the final documents.

General Comment

The Effects portion of the document deals primarily with a physical description of the project area. Little information is given to show consequences or tradeoffs to the proposed action. Since PGT/POE route follows an existing corridor there was little attention to analysis of alternative routes and probably rightly so.

Our review found the document to be not as site specific as most EIS's would warrant if prepared by the Forest Service following our normal procedures and regulations.

But since this project is unique in that the Agencies have had the opportunity to accomplish many site-specific reviews with the pipeline companies and are in the process of developing Construction, Operation, and Maintenance (COM) plans, which are to be required by the BLM right-of-way grant we feel we will be able to require the necessary mitigation. Our comments will be directed toward the DEIS and site-specific requirements for COM plans.

Altamont Gas Pipeline Project

The proposed Pipeline location does not cross National Forest System (NFS) lands. Alternative Route 28 Variation crosses small parcels of NFS lands. The Forest Service agrees with the DEIS in its recommendation that Alternative Route 28 Variation receive no further consideration for the final location of the pipeline for the reasons stated on pages 6-28.

PGT/PGE Gas Pipeline Expansion Project

Comments relative to the DEIS.

Cultural Resource

The treatment of cultural resources in Chapters 3M and 4M was very general. Traditional cultural areas and concerns have been addressed and the DEIS displays evidence of contact with tribes, whose reservations or ceded lands would be impacted. However, at least in Warm Springs Reservation's case, response was not received before the issuance of the DEIS and thus not included. No field surveys have been conducted with the APE to locate significant paleontological resources (fossil remains and formations) prior to the issuance of the DEIS.

Wildfire

FA9-1 There is no discussion of the potential consequences of a wildfire being started during the construction of the pipeline. During the period of June to October there is always the potential for construction and clearing activities to start a wildfire.

If a wildfire starts and is not immediately controlled it could cause considerable damage to both forested and shrub and grass vegetated areas.

The risk of wildfire will be reduced by following approved practices and using mitigation measures that will be required in fire prevention plans to prevent the opportunity for the ignition of a fire.

Page 2, Front Notice, Par. 2, Sent. 4

"However, because their facilities would not be constructed without FERC approval of the PGT/PGE expansion, the DEIS discusses the potential impact of the nonjurisdictional PGT/PGE facilities on federally listed threatened and endangered species, cultural resources, and federally administered lands within California."

FA9-2 Comment: The potential impact of federally listed threatened and endangered species and cultural resources is discussed within the DEIS, but very little is discussed concerning the federally administered lands within California.

Page xxvi GLO

FA9-3 GLO stood for Government Land Office not "Organization."

Page S-4, Par. 1

FA9-4 "...4 acre expansion of the existing Compressor Station No. 12..." The Forest Service is concerned with this sentence because we have not yet received enough information to know that the station is to be expanded by 4 acres. On field review with PGT in October 1990 this issue was discussed. The District Ranger prefers not to expand the station permit boundary. An alternate proposal is to expand the existing fence to within 10 feet of the current boundary only as

FA9-1 Comment noted. See revised Chapter 3K.

FA9-2 Impacts on federally administered lands within California were addressed in the CPUC's DEIR and FEIR, which the FERC staff has incorporated by reference into its DEIS and FEIS. Therefore, these potential impacts have been adequately addressed.

FA9-3 "GLO" stands for "General Land Office".

FA9-4 Based on conversations between PGT, the Forest Service, and the FERC staff, we have clarified that PGT proposes to move its existing fence up to 5 feet. This relocation would not require an expansion of the existing station permit boundary. See revised Executive Summary.

FA9-4 (cont.) needed to accommodate additional piping. Due to the sensitivity of this station with the owners of Vandevert acres subdivision, it is important that this be resolved.

Page S-11, Par. 4, Sent. 4

FA9-5 "However, because the critieria that the CPUC utilized to identify potentially significant impacts were different than the critieria utilized by the FERC staff, we have not attempted to summarize the potential significance of any environmental impact associated with the construction of PG&E's nonjurisdictional facilities."

Comment: if the criteria utilized to identify potentially significant impacts is different, shouldn't the impacts on the federally administered lands within California follow the criteria utilized by FERC or those which are most stringent?

Page S-16, Par. 2, Sent. 4

FA9-6 "Finally, FERC is in the process of preparing a Biological Assessment (BA), as required by the ESA, to determine whether the proposed project would effect federally listed or proposed threatened or endangered species, or their designated critical habitat.

Comment: Shouldn't the Forest Service designated sensitive species also be included? On Page 3E-1 a list is provided of what will be included as a special-status plant species. "Species listed as sensitive by FS" is included within this list.

Page 2-3, Par. 1

FA9-7 The paragraph made no distinction between private land and Federal land jurisdiction as related to livestock grazing. It is assumed that the paragraph applies to permitted livestock on National Forest lands as well as private lands.

Page 2-3, Par. 2

FA9-8 Pesticide application, if used to clear the right-of-way, must conform with EPA regulations, label restrictions, and the Regional Environmental Impact Statement on Vegetative Management.

Page 2-3, Par. 2

FA9-9 Clearing. Debris and slash created..., or landowner agreements. The agencies or landowners may agree to allow the material to be burned. Burning would be an affect on air quality and this has not been discussed, or the effects should be addressed.

Page 2-3, Par. 3, Sent. 3

FA9-10 "Stumps would be removed only as required by pipeline installation."

Comments: Page 2-33, Par.6, Sent. 2 states: "All stumps would be grubbed from a continuous strip, 30 feet wide and centered on the new trench center line."

FA9-5 See response to comment FA9-2.

FA9-6 The ESA only requires that a BA be prepared for federally listed species. The ESA has no application to Forest Service listed sensitive species.

FA9-7 The stated assumption is correct.

FA9-8 Comment noted. No response required.

FA9-9 The need for the project applicant to dispose of cleared materials in accordance with applicable regulations and permits is clearly identified in Chapter 2. Impacts associated with burning are discussed in Chapter 4H: Environmental Consequences: Air Quality.

FA9-10 These statements are not contradictory but merely establish prudent construction practices.

FA9-10 (cont.)	Do these two sentences contradict each other? It doesn't seem necessary to clear 30 feet in all instances. Grubbing on slopes could increase the potential for erosion.	
	Page 2-3, 5	
FA9-11	Ditching and Road Crossings. Pipeline trenches. It is not clear what the depth will be for road crossings. Are these considered to be in the category of "Cultivated areas?" Our concern is the cover over the pipes be sufficient to allow for road maintenance and ditchline maintenance, and that depth is sufficient to provide strength for log haul and heavy equipment.	FA9-11 Specific depth of pipe burial at all road crossings will be determined by the applicable permitting authority, or through negotiations with the land owner/land management agency.
	Page 2-4, Par. 3	
FA9-12	This paragraph should mention that the trenches will have ramps added to them while they are open so wildlife and cattle may escape.	FA9-12 Comment accepted. See revision to this paragraph.
	Page 2-5	
FA9-13	Road Crossings. Detours: This paragraphs indicates that either detours or construction bridging will be used on road crossings. Actual closure of the road to traffic is another option, especially on our lower standard and lower use roads. This would be beneficial, where applicable, to limit the impacts of detour construction where not necessary. Suggest that this option at least be mentioned where permitted by the local authority or owner of the private road.	FA9-13 Thank you for this information. No response required.
	Page 2-8, Sec. 2.2.2	
FA9-14	This section mentions nothing about the expansion of compressor stations. Expanded stations would need to meet the same requirements.	FA9-14 This section only discusses proposed new facilities, and does not specify requirements.
	Page 2-15, Sec. 2.3.1, Par. 2	
FA9-15	It again mentions the expansion of Compressor Station 12. Perhaps a more detailed discussion of the alternatives would be appropriate.	FA9-15 See revised Chapter 2.
	Page 2-20, Sec. 2.3.2, Par. 2	
FA9-16	"...Lava River Cave Park..." Lava River Cave is not a park. It should just read "....Lava River Cave..."	FA9-16 Comment accepted.
	Page 2-20, Par. 7	
FA9-17	Many of the MP's listed are wrong. It should read: Loop 8 extends from the Oregon/Calif. border at MP 612.5 to the Burney Compressor station at MP 694.8. The pipeline runs through the Klamath Basin parallel to SR 139 to MP 623. The pipeline runs through the Modoc National Forest and over some privately owned ground from MP 625 to MP 660. Locations within the Modoc National Forest Boundary include Tionesta Compressor Station at MP 637.1, the bend in the pipeline running southwest at MP 643 and Long Bell Wildlife Refuge from MP 649 through MP 653.6.	FA9-17 See revised Chapter 2.

FA9-17 (cont.)	The pipeline runs through the Shasta National Forest administered by the Lassen National Forest from MP 660 to 676.5 with no private land included. (Past Maps show portions of privately owned land which was recently acquired by the National Forest through a land exchange. The pipeline crosses BLM land from MP 676.5 through 677.5. The loop would enter Fall River Valley at MP 677.5 and continue to approximately 680.1. It reenters the Shasta National Forest which is administered by the Lassen National Forest at MP 680.13 and leaves the Forest at 692.19. Lake Britton crossing at MP 687, Highway 89 at MP 690.77 and some private lands are included within this stretch. It crosses Highway 299 near MP 692.44 and ends at Burney Compressor Station at MP 694.8.	
FA9-18	Page 2-21, Par. 3, Sent. 1 "Loop 9 would extend through the Lassen National Forest" Comments: This parcel is no longer a part of the National Forest System lands.	Comment accepted.
FA9-19	Page 2-24, Par. 6 Requirements for Permanent Right-of-Way. Section does not clearly explain the 1962 easement width and the 1985 easement grant plus working strip requirements. The ANGTS grant also affected the PGT segment in Idaho, Washington, and Oregon.	This issue is adequately addressed in Chapter 2, Section 2.3.3, Figures 2-6, and Appendix D-1.
FA9-20	Page 2-30, Sec. 2.3.3, Par. 5 This section again mentions the expansion of Compressor Station 12. As discussed above, it is not appropriate to mention this unless it is described accurately.	See response to Comments FA9-14 and FA9-15.
FA9-21	Page 2-30, Par. 5 Comment: What Station Number is Tionesta? Will it be expanded?	The Tionesta Compressor Station is not proposed to be expanded.
FA9-22	Page 2-33, Par. 2 No temporary pipe storage areas or temporary staging and storage areas for heavy equipment and excavated materials will be approved for location on NFS lands in the Pacific Northwest Region.	Thank you for this information. No response required.
FA9-23	Pages 2-33 Pipe Storage Area. Temporary access roads. Since these roads are ground disturbing, even though temporary, authorization would need to be in compliance with NEPA and required cultural and sensitive plant surveys.	Staff agrees with this comment.

	Page 2-33, Par. 6		
FA9-24	Right-of-Way. PGE/PGE is not proposing to clear the entire permanent right-of-way for both pipelines. It will not be necessary to clear the entire 25 feet to the west of existing pipeline as shown on pages 2-28.	FA9-24	PGT's application filed in Docket Number CP90-460-001 proposes to clear the entire permanent right-of-way.
	Page 2-36, Calif. Storage area		
FA9-25	Comment: Perez--MP 643.6, twenty acres. It has been mutually agreed by the Forest Service and PG&E that the Perez site is unacceptable for a staging area.	FA9-25	Comment accepted. See change to Table 2-6.
	Page 2-37, Par. 2		
FA9-26	Road Crossings. Major Forest Service roads may also need to be bored and this will be determined in the Transportation Plan being developed by PGT/PGE.	FA9-26	Thank you for this information. No response required.
	Page 2-39, Par. 2		
FA9-27	Construction Schedule. We understand from PGT/PGE schedules that clearing could start on National forest System land in the Fall of 1991 and pipeline construction beginning in 1992 in the Moyie River Loop. The construction schedule must comply with seasonal restrictions in the appropriate Forest Land and Resource Management Plan, other controlling Plans or Record of Decisions, and COM Plans.	FA9-27	See revised Chapter 2.
	Page 2-40, Table 2-9		
FA9-28	Table needs to be revised to reflect current planned construction schedules.	FA9-28	Comment noted. See response to Comment FA9-27.
	Page 2-41, Par. 4		
FA9-29	Trees would be periodically removed along a 40-foot wide strip above the pipeline. PGT/PG&E would allow natural revegetation to occur over the remainder (approximately 60 feet) of the right-of-way. Comment: On Federal land we would like the sentence to refer to clearing a 10-foot wide strip either side of the pipelines with natural or planted vegetation being permitted over the remainder of the right-of-way.	FA9-29	Chapter 2 refers to PGT's proposed action and not the specific requirements that either the FERC staff or any other regulatory agency may impose on PGT. A discussion of recommended mitigation is contained in Chapters 4 and 6.
	Page 2-41, Par. 4, Sent. 2		
FA9-30	"When these trees are 2-3 inches diameter at breast height they would be mechanically cut, chipped into pieces less than three inches long, and scattered over the right-of-way." Comment: Wood chips should not be scattered over the right-of-way until several years after the area is revegetated. The wood chips would tie up nitrogen while decomposing which would be detrimental to the revegetation goals.	FA9-30	See response to Comment FA9-29.

FA9-31	Page 2-41, Par. 5 Operation and Maintenance Procedures. States that herbicides will not be used for right-of-way maintenance. Rights-of-way have been the primary location for the introduction and spread of noxious weeds on Federal lands. Herbicides may be part of the solution to control or eliminate existing or new noxious weeds. The direction we are getting and the most recent laws regarding noxious weeds indicates an active approach to controlling noxious weeds. The possible application of herbicides should be included in the EIS. Any manipulation of unwanted vegetation must be in accordance with the Regional Vegetation Management Environmental Impact Statement, 1988, within the Ochoco, Winema, and Deschutes National Forests.	FA9-31	See response to Comment FA9-29.
FA9-32	Page 3a-10, Par. 6 "Landforms created by Pliocene- and Pleistocene-Age volcanic activity are found in the vicinity of the right-of-way." Some features go back into the Miocene so possibly it could read as follows: "Landforms created by Miocene- and Pleistocene-Age volcanic activity are found in the vicinity of the right-of-way."	FA9-32	Thank you for your comment. We believe that your possible change contained a typographical error since it would delete reference to any land forms created by Pliocene volcanic activity. Therefore, we have revised our text accordingly in Chapter 3A.
FA9-33	Page 3A-10, Sec. 3A, Par. 7 "Near Lava Butte, the right-of-way would cross the southeastern flow of two lava flows, called the Gas Line flows, which are 5,800 years old, according to carbon-14 dating. Some eruptions at the southeast end of the zone are considerably younger than 1,970 years, with considerably less modified surfaces than the Gas Line Flows." We are not aware of any 1,970 date so possibly it could read as follows: "Near Lava Butte, the right-of-way would cross the southwestern flow of two lava flows, called the Gas Line Flows, which are 5,800 years old according to carbon-14 dating. Carbon-14 dates along the entire Northwest Rift Zone range from 5,800 to 6,200 years but other field evidence suggests a narrower time span at about 6,100 years."	FA9-33	Thank you for your comment. Please see revised Chapter 3A.
FA9-34	Page 3A-11, Sec. 3A, Par. 4 "Local attenuation of ground shaking may occur in areas of unconsolidated materials." Probably do not mean attenuation. Unconsolidated materials usually amplify ground shaking. Possibly it could read: "Local amplification of ground shaking may occur in areas of unconsolidated material."	FA9-34	Thank you for your comment. Please see revised Chapter 3A.
FA9-35	Page 3A-12, Sec 3A, Par. 1 Beginning with the third sentence, text could read: "Eruptions along the Northwest rift zone of Newberry Volcano occurred between 5,800 and 6,200 carbon-14 years ago. Volcanic activity of similarly recent age has also occurred in the caldera atop Newberry Volcano. Some obsidian flows and pumice and ash deposits in the area are 1,300 to 6,800 years old."	FA9-35	Thank you for your comment. Please see revised Chapter 3A.
FA9-36	Page 3A-12, Sec. 3A, Par. 3 "Mineral resources in the state are limited to sand, gravel, cinder, ..." Although there are no geothermal leases along the proposed route, there is the potential for this. May want to include mention of this here.	FA9-36	Thank you for your comment.

	Page 3A-12, Sec. 3A, Par. 4		
FA9-37	Beginning with the second sentence under Unique Geologic Features, we would prefer this to read: "The young lava flows of the High Lava Plains province are also of interest, especially those associated with Newberry Volcano. Near Lava Butte, the pipeline passes through the newly created Newberry National Volcanic Monument. Lava tubes, such as those at Lava River Cave, are unique."	FA9-37	Thank you for your comment. Please see revised Chapter 3A.
	Page 3B-1		
FA9-38	Oregon. Noxious weeds were not mentioned, but may be a problem that can be resolved by a noxious weed prevention plan written as a COM Plan for Forest Service approval.	FA9-38	Thank you for your comment. Noxious weeds and their control are mitigation issues that were addressed in other chapters of the DEIS. For specific discussion of noxious weeds, please see Chapter 4B (Weed Control), Chapter 6, and Section VII.E. (Maintenance) in Appendix B-1.
	Page 3C-3, Par. #2		
FA9-39	Water quality degradation, such as channel sedimentation and turbidity, are attributed to timber harvesting activities. Timber harvest activities may be a factor, but the impacts of building and maintaining a railroad and county road immediate adjacent to the river are at least as important factors.	FA9-39	Comment noted. No response required.
	Page 3D-4, Table 3D-2		
FA9-40	Table 3D-2. Table indicates there are no Forestry/forest preservation lands along the PGT route in Idaho. Much of the National Forest lands where the new line is proposed is forested land.	FA9-40	This table represents land use designations from county plans. No land use designated as forestry or forest preservation was found in the Idaho counties' plan. The actual forested lands are listed in this table under Agricultural Preservation and Rural land uses.
	Page 3D-4, Table 3D-3		
FA9-41	Table indicates there are no Forestry/forest preservation lands along the PGT route in Idaho. Much of the NFS lands associated with the project are forested lands as are some of the private lands.	FA9-41	See response to Comment FA9-40.
	Page 3D-7, Sec. 3D, Par. 3		
FA9-42	"...In addition, PGT proposes to acquire 4 acres adjacent to its existing Compressor Station No. 12..." The Forest Service recommends not expanding the existing station permit area. We would prefer allowing expansion of the effective (fenced in) area on the existing permit area to accommodate PGT's needs.	FA9-42	Comment accepted. See revised Chapter 3D.
	Page 3D-8, Sec. 3D, Par. 7		
FA9-43	"...Approximately 2 miles of the route would be within the boundary of the proposed Newberry National Volcanic Monument..." Should say: "Approximately 2 miles of the route would be within the boundary of the newly designated Newberry National Volcanic Monument."	FA9-43	Comment accepted. See revised Chapter 3D.
	Page 3E-1		
FA9-44	Special-Status Plant Species. Species listed as sensitive by FS have been included as Special-Status Plant Species, but these species are not carried throughout the document.	FA9-44	Comment accepted. See revised Chapter 4E.

Page 3E-2, Par. 5, Sent. 3

FA9-45 States that the PGT method of identifying wetlands tends to underestimate the amount of jurisdictional wetlands present because small, isolated wetlands frequently do not appear on National Wetland Inventory maps.

Comment: A ground survey must be completed to identify any wetlands on National Forest System Lands.

Page 3E-11 Par. 3

FA9-46 Special Native Plant Communities. Statement that no special native plant communities would be crossed by the pipeline route in Idaho. This is incorrect. Information from the Endangered Plant Survey for the PGT-PG&E Pipeline Expansion Project, Idaho, Washington, Oregon and California (EPS for PGT-PG&E), prepared by Biosystems Analysis, Inc., reveals that "the single remaining natural remnant of the original Idaho Fescue-dominated Rathdrum Prairie in Idaho occurs at M.P. (milepost) 102" (EPS, p. 2-4). The EPS report shows a black and white photograph, Figure 2.2-2, p. 2-4, and the caption reads, "View of the right-of-way of the PGT-PG&E Expansion Project in the vicinity of the Rathdrum Prairie, Idaho (M.P. 102)."

This remnant of native perennial bunchgrass prairie, dominated by Idaho Fescue, Sandberg bluegrass, and June grass, is one of the few remnant stands of this community type in the region". Also, stated in the EPS report, p. 5-11, paragraph 5.4.4 Bunchgrass Prairie, this Rathdrum Prairie remnant is mentioned as an area where the Expansion Project will traverse. The report states that "site-specific mitigation plans should be developed for post-construction rehabilitation" at each of these sensitive habitat locations (EPS, p. 5-11). Apparently a special native plant community in Idaho is crossed by the pipeline expansion route.

Page 3E-14, Table 3E-3

FA9-47 Indicates that the long-billed curlew (Numenius americanus) and the pacific western big-eared bat (Plecotus townsendii townsendii) do not occur in Klamath County. These two species have been documented on the Winema National Forest. Please see U.S. Forest Service Sensitive Species List updated March 1989 and Sensitive Species Guide for Area IV by Bill Hopkins and Stuart Garrett, June 1990.

Page 3E-23, Par. 6

FA9-48 Indicates that no suitable habitat occurs on the Winema National Forest for Plecotus townsendii townsendii. Suitable habitat does occur in Oregon and is described as "...cultivated valleys bordered by deciduous forests, brush, junipers, and pine forests " (Hopkins, 1990-Sensitive Species Guide for Area IV).

Page 3E-23

FA9-49 Numenius americanus is documented in Oregon, however, this species was not addressed in the text. This species should be addressed as to potential effects of the proposed pipeline on this species and its habitat. Habitat for this species includes: marshes, beaches, and mudflats.

FA9-45 Thank you for this information. No response required.

FA9-46 Comment accepted. See revised Chapter 3E.

FA9-47 Comment noted. No response required.

FA9-48 The referenced discussion pertains to California and not Oregon as the commentor suggests. See revised Chapter 3E.

FA9-49 See response to Comment FA9-48.

FA9-50	Page 3F-2, Table 3F-1 Table 3F-1. Scientific name for Cutthroat trout is not correct. Should be Oncorhynchus clarki.	FA9-50	Comment accepted. See revised Table 3F-1.
FA9-51	Page 3F-3, Table 3F-2 Special-Status Fish That May Occur In Streams Along the PGT Route. Modoc sucker is listed under California. Comment: The closest Modoc sucker exists approximately 25 air miles and 50 water way miles from the existing project.	FA9-51	Thank you for this information which is reflected in revised Chapter 4F.
FA9-52	Page 3F-3, Table 3F-2 Incorrect scientific name for the lost river sucker. The correct scientific name is Deltistes luxatus.	FA9-52	The scientific name for the Lost River Sucker was provided by the U.S. Fish and Wildlife Service; therefore, staff disagrees with the proposed change.
FA9-53	Page 3F-4, Par. 1 Special-Stutus Fish Species. There is a need to monitor the affects. What will be done if mitigation fails.	FA9-53	This subject is discussed in Chapter 4F.
FA9-54	Page 3F-5 Special Status Fish Species. Location of suckers not given. Refer to page 4F-7 and expand discussion here.	FA9-54	In order to protect special-status species from increased disturbance from humans, no specific locations of occurrence are provided. See revised Chapter 4F for additional information on these suckers.
FA9-55	Page 3F-5, Par. 2 Willow Creek (M.P. 421) is critical habitat for rainbow trout.	FA9-55	Comment accepted. See revised Chapter 4F.
FA9-56	Page 3F-5, Par. 6, Sent. 2 "The Modoc sucker, a federally listed endangered species, is known to occur in three small tributary systems of the Pit River." Comment: The small tributaries are located at least 50 miles upstream from the existing Pit river crossing over Lake Britton.	FA9-56	Comment accepted. See revised Chapter 4F.
FA9-57	Page 3H-1, Par. 1 This paragraph has a discussion on how additional or modified compressor facilities may affect the environment. Information supplied by the Oregon Department of Environmental Quality, Air Quality Section indicates that Compressor Station 11 was expected to show a significant increase in NOx requiring a re-permitting under the PSD rules. (NOTE: Forest Service will supply Oregon air quality contact to FERC to resolve this issue, as requested by FERC.)	FA9-57	Only those compressor stations where the installation of additional compression is proposed (i.e., Numbers 3, 5, and 7) would experience increased air emissions. The re-permitting of Compressor Station Number 11, which the commentor refers to, has already been completed and was unrelated to the proposed PGT/PG&E Expansion Project. This re-permitting was the result of the routing replacement of compressor units conducted pursuant to 18 CFR 2.55.

	Comment		Response
FA9-58	Page 3H-1, Par. 2 Under Regulatory Requirements section, there is no indication of distance from the project to class I and II areas. Compressor Station 11 is well within the 100 km range of the Mt. Jefferson Wilderness to the west (Class I). It is also located on the Crooked River Grassland (Class II). Several other compressor stations along the Oregon portion of the PGT line are similarly located with regard to other Class I and Class II areas.	FA9-58	Comment accepted. See revised Chapter 3H.
FA9-59	Page 3H-3, Par. 4 In Ambient Air Quality section, Oregon is virtually not discussed. The central Oregon area has an air circulation pattern that frequently sees air stagnation periods exceeding several days in length, several times each year. There are three small urban areas within 16 miles of Compressor station 11, two of which are in valleys that tend to have frequent temperature inversions. The Madras basin to the west of Compressor station 11 and the Prineville valley basin to the southeast receive the station emissions regularly. The city of Bend is about 45 km to the southwest and is occasionally impacted by emissions from Compressor station 11 and more frequently from Station 12 several kilometers to the south of Bend. The central Oregon air shed is regularly impacted by a regional haze problem. This affects visibility on both Class I and Class II areas as well as within a half dozen small urban areas. The Air Quality sections of the project EIS does not address the contributions from the compressor stations.	FA9-59	See response to Comment FA9-58.
FA9-60	Page 3H-1 Environment Air Quality. There is no discussion of PM-10 particles nor is their any discussion on the impacts on Class I air sheds, such as Crater Lake National Park, if debris created by clearing the right-of-way is disposed of by burning. The city of Klamath Falls is a nonattainment area for PM-10 particles. Currently there is a voluntary smoke management plan in place that has an objective of preventing smoke intrusions into the Klamath Falls area. The current Smoke Management Plan is being revised and the area around Klamath Falls will probably be designated as a special protection zone. This will lead to increased restrictions to prevent impacts on Klamath Falls. In the current Smoke Management Plan there is a restriction on burning of forest debris from July 4 to Labor Day to prevent impacts on Class I air sheds. It is currently proposed to change to a restriction period of July 1 to September 15.	FA9-60	See response to Comment FA9-58.
FA9-61	Page, Section 3H This chapter only mentions dust etc. as temporary hazards to air quality during the construction phase. It does not mention the smoke that would be generated by the burning of slash piles. Although this would only be temporary, coordination to burn would be important for air quality.	FA9-61	See revised Chapter 3H.

	Page, Section 3I		
FA9-62	Suggest that this chapter mention the fact that there will not be an increase in operating noise level at Compressor Station No. 12 since the subdivision owners nearby will be wondering about this.	FA9-62	Increases in operating noise levels will only occur at those compressor stations where additional compression is proposed (i.e., Numbers 3, 5, and 7).
	Page 3J-1, Par. 4		
FA9-63	Idaho Pipeline Crossings. It seems the sentence that addresses crossing 28 county roads and railroads at eight locations may have its numbers in reverse order. Also, there is no reference to Forest roads that are part of the affected environment.	FA9-63	Comment accepted. See revised Chapter 30.
	Page, Section 3K		
FA9-64	This chapter discussed only the hazards of natural gas. Construction hazards such as traffic use on public roads, blasting, and safe access across the pipeline trench could be discussed here.	FA9-64	The primary public safety issue related to interstate natural gas pipeline projects is the implementation of proper design and construction safety standards. Secondary safety issues such as road crossings, blasting and safe access are discussed in Chapters 2, 3J, and 4J.
	Page 3M-1, Par. 1		
FA9-65	The wording should be: Cultural Resource Inventory, not "Study". Study implies more in-depth research leading to determinations of eligibility and data recovery.	FA9-65	Change made. See revised Chapter 3M.
	Page 3M-5, Par. 2		
FA9-66	The last sentence implies that these sites are not eligible, last part of sentence should read: , or have yet been formally determined eligible for, the NRHP.	FA9-66	Change made. See revised Chapter 3M.
	Page 3M-6, Par. 3		
FA9-67	Same as above.	FA9-67	Change made. See revised Chapter 3M.
	Page 3M-9, Par. 3		
FA9-68	Idaho Native American Concerns. Comments concerning the Camp Nine Alternative (if developed) need to be solicited from the Kutenai Tribe. They were not consulted regarding this possible alternative and may have some significant concerns about this route.	FA9-68	Comment noted. Consultation with all tribes exhibiting interest in the project is on-going PGT has indicated that it will continue consultation on matters of concern to Indian tribes.
	Page 3M-9, Par. 5		
FA9-69	Coordinate Cultural Resource activities with the designated representatives of the Confederated Tribes of the Warm Springs Indian Reservation.	FA9-69	See response to Comment FA9-68.
	Page 4A-3, Sec. 4A, Par. 5		
FA9-70	This paragraph discusses the pipeline crossing of the Northwest Rift Zone. The location that the pipeline crosses this fault is inside the newly designated Newberry National Volcanic Monument. It is important therefore that the	FA9-70	Thank you for your comment. The safety concerns relating to pipeline construction within a region that is potentially (seismically) active are addressed in the last sentence of the paragraph and in the paragraph below it.

FA9-70 (cont.) disturbance of this feature be kept to a minimum when it is crossed. So, we would prefer the paragraph state the pipeline will be constructed to meet safety concerns, but it will be done according to a site specific design set forth in a COM Plan.

Page 4A-4, Sec. 4A, Par. 4

FA9-71 "No mines, quarries, oil or gas fields would be crossed by the PGT pipeline route..." Should also mention that there are no geothermal leases in the area at this time.

Page 4A-7

FA9-72 Minerals Res. Pit and Quarry Materials needs. This speaks to impact on mineral resources due to crossing by the gas line. An impact to the minerals resource could also be use of pit and quarry materials for the pipeline construction activities. This may not be significant, but the need for any pit or quarry materials on National Forest. System land will need to be requested well in advance of the need. Availability of material from the Deschutes, Winema, and Ochoco National Forests will depend on NEPA analysis.

Page 4A-7

FA9-73 Mineral Res. Pumice mines are located in the vicinity of the gas line directly west of Beaver Marsh. Contact Weyerhaeuser Co. and Klamath County.

Page 4B-1
Page 4B-5, Par. 1
Page B-1-4 IV.D

Significant impacts. The context of these sections considers reduced productivity of agricultural soils only, and seems to imply compaction mitigation would only be needed on agricultural soils. The relative impact of compaction on forest and range lands may exceed that on agricultural lands when they are of a more fragile nature.

Page 4B-2, Par. 4, Sent. 5

FA9-74 "Except where otherwise noted in this chapter, any deviations from our Plan that involve less protective measures must be filed with the Secretary of the Commission for review and approval by the Director OPPR prior to implementation."

Comment: The Forest Service may deviate from the Plan, but not with less protective measures. Plans for NFS lands will be detailed and site specific. The Forest Service does not see the need to file their changes with the Secretary of the Commission for review and approval by the Director OPPR prior to implementation. We would like the EIS to read the COM Plans would be developed and approved by respective Federal Agencies.

Page 4B-4, Par. 6

FA9-75 First Sentence Should Read: depth of 4", or as required, using a winged ripper.

FA9-71 Thank you for your comment. Please see revised Chapter 4A.

FA9-72 Thank you for the information. Also see revised Chapter 4A.

FA9-73 Thank you for your comment. An important concern, for which our Plan was originally developed, is the long-term effect of construction (and consequential economic impact to a landowner) on agricultural land. Implementation of our Plan also would minimize impacts to forest lands and range lands.

FA9-74 Thank you for your comment. The requirement to file with the Secretary of the Commission any deviations from our Plan that are less protective, applies to the project applicant, not to Federal cooperating agencies. Please note that under DEIS Recommendation No. 18 (Chapter 6), the applicant is required to consult with authorities from the appropriate National Forest and/or Bureau of Land Management District Offices and follow their restoration recommendations even if these recommendations differ from those that appear in Appendix B of the FEIS.

FA9-75 Thank you for your comment. The implication that a winged ripper should be used to scarify the soil to a depth of 4 inches, or as required, is of course correct. However, please note that the context of the sentence is what PGT stated in its erosion control plan that it would do. To this effect your attention is called to PGT's Preliminary Erosion Control and Restoration Plan, item No. 1, page 48, which contains no mention of a winged ripper. Therefore, the sentence should remain unchanged.

Page 4B-5, Par. 2

FA9-76 Topsoil Segregation The document talks about stockpiling topsoil on cultivated and range land, but does not mention forested areas. The volcanic ash surface soil found over much of the IPNF has a high cation exchange capacity and water holding capacity and is the best medium for plant growth. It should be stockpiled and placed back on top the subsoil after the disturbance is completed. Using the volcanic ash in this way will also contribute some native seed to the revegetation process.

Page 4B-6, Par. 1

FA9-77 Revegetation. One element of the revegetation program not discussed in this part of the draft is the planting of trees on NFS lands currently in a forested condition. This requirement has been presented to PGT.

Page 4B-7, Par. 5

FA9-78 Weed Control. Add: Hay or straw used for drainage/erosion control must be obtained locally.

Early detection of invasion of weeds is essential. Inventory of the revegetated area is essential to insure weed species are not transported into the area by project activities. Prevention is the preferred method of weed control. At a minimum, PGT/PGE must develop procedures for cleaning equipment that are sufficient to prevent weed seed travel via dirt on equipment during both construction and revegetation phases. As a prevention measure, it is recommended that all equipment be washed before entering the project area.

If inventory identifies areas of noxious weed establishment of a Vegetative Management Plan and an analysis of the plan shall be prepared, consistent guidance given by the Record of Decision for EIS for "Managing Competing and Unwanted Vegetation," USDA-Forest Service, Pacific Northwest Region, November 1988 and subsequent Mediated Agreement with litigants.

Activities associated with this pipeline project including site preparation by mechanical methods and other vegetation management, including the prevention of introduction of noxious weeds and control of noxious weeds would require project design, mitigation, and monitoring measures.

Reference is made to "napweed" (correctly spelled knapweed) in Bonner and Kootenai Counties in Idaho. Boundary County should be listed as well.

Page 4B-8, Par. 5

FA9-79 Increased Soil Erosion. A list of locations is given of areas . . . "having either a moderate or a high susceptibility to water and/or wind erosion." Page 3B-1 of the same document states (that in Idaho) "rehabilitation potential of most soils is moderate to low." In PGT's document "Right-of-Way Restoration Overview", the soils associated with Loop 1, Boundary County, Milepost 0-20.1, the erosion potential index is 6 which is a moderate rating. This segment should be added to the list on page 4B-8.

FA9-76 Thank you for your comment. It is certainly not our intention to minimize the importance of appropriate restoration on National Forest System land. See response to Comment FA9-74.

FA9-77 Thank you for your comment.

FA9-78 Thank you for your comment. Please see the applicable revisions to Chapter 4B. Also, please note that in paragraph 5 and in Recommendation No. 23 of Chapter 6 we recommend that PGT develop a weed control plan in coordination with appropriate federal, state, and/or local agencies.

FA9-79 Thank you for your comment. The intent of the list on page 4B-8 of the DEIS was to show only the locations of relatively large, contiguous segments along the PGT route that may experience erosion problems. Our independent analysis of the 20.1 mile-long Loop 1 indicated a moderate potential for soil erosion along relatively small and discontinuous segments, namely along milepost 0 to 2, 5 to 6, and 11 to 12. Consequently, these segments were omitted from the list. However, non-inclusion of these small, discontinuous segments on the list does not relieve PGT from undertaking appropriate restoration of its right-of-way.

FA9-80	Page 4B-9, Par. 3 Last sentence should state (either here or in Chapter 6): To minimize these impacts PGT shall develop....	FA9-80	Thank you for your comment. Please see revised Chapter 6.
FA9-81	Page 4B-9, Par. 4, Sent. 2 "PGT would consult with the Forest Service district authorities for each National Forest that would be crossed to determine the suitable criteria for seeding and the specific seeding recommendations for each of these National Forests. Comment: Should read--PGT would consult with the Forest Service Regional PGT/PGE Natural Gas Pipeline Liaisons...	FA9-81	Thank you for your comment. Please see revisions in Chapter 4B and Chapter 6.
FA9-82	Page 4C-1, Par. 1 The document defines impacts as temporary (1 year), short term (1-3 years), and long term (3 years plus). At least for water quality issues the State DEQ defines short-term impacts in days not years. This discrepancy needs to be clarified.	FA9-82	The state DEQ's definition of short-term impacts would correspond to the staff's definition of temporary impacts.
FA9-83	Page 4C-1, Par. 5 If problems were encountered with the first pipeline disclosure of those effects may be appropriate here.	FA9-83	The paragraph referenced by the commentor describes the staff's "Criteria for Determining Significance". As such, a discussion of impacts is inappropriate here. In addition, the staff is not aware that any problems occurred during the construction of the existing pipeline.
FA9-84	Page 4C-2, Par. 3 The discussion of sediment plumes in streams is incomplete without information as to how much sediment is likely to be released, how far might the effects move downstream, and for how long might the effects be felt.	FA9-84	Site specific information of this type is not available without detailed hydrologic modeling. However, based on the staff's extensive experience in the field of pipeline construction, implementation of staff's recommended "Stream and Wetland Construction and Mitigation Procedures" will ensure that construction related impacts are not significant.
FA9-85	Page 4C-2, Par. 5 With regard to increased turbidity of recipient water bodies--it is not only the length of streambank disturbed, but the possible contributing area (area of trench and cleared bank) that should be evaluated. At a minimum, trench dewatering activities need to comply with State water quality standards for no more than a 10 percent increase in turbidity above background levels.	FA9-85	The Staff's Procedures (Appendix C-3) mandate a 0 percent increase in turbidity as a result of trench dewatering activities.
FA9-86	Page 4C-2, Par. 6 This paragraph describes effects of sediment on dissolved oxygen. This brings up the question of sediment effects on fish populations e.g., gill abrasion, smothering of spawning gravels, interference with feeding, and the effect of sedimentation on macro-invertebrate populations.	FA9-86	These impacts are discussed in Chapter 4F.
FA9-87	Page 4C-3, Par. 4 Pumice soil is porous and the soil profile often lacks a restrictive layer.	FA9-87	Thank you for this information. No response required.

FA9-88	Page 4C-4, Par. 2 Considering the potential impacts associated with hydrostatic testing, in particular the withdrawal and discharge of the test water--have any alternatives to this method been explored, e.g., air?	FA9-88	The use of water as a medium to test the integrity of natural gas pipelines is a standard industry practice. No alternative methods have been examined by either Altamont or PGT as of this time.
FA9-89	Page 4C-6, Table 4C-2 Proposed hydrostatic test withdrawal locations and timing for the PGT Project. Comment: Where will the hydrostatic test withdrawal location be for section 8? It wasn't given in the FEIR.	FA9-89	The proposed locations contained in Chapter 4C are the only ones identified by PGT to date.
FA9-90	Page 4C-8, Par. 1 The physical effect of the discharge of hydrostatic test water is mentioned. What about water quality at the discharge point, e.g., contaminants from the pipe interior including metals, greases, and oils? There is also the potential for the transfer of waterborne pathogens or unwanted species of insects or fish to the receiving stream.	FA9-90	Available data indicates that hydrostatic test water from new pipe is not contaminated with significant quantities of any regulated pollutant. Concerns regarding the transfer of waterborne pathogens or unwanted species of insect or fish are best addressed by the appropriate state permitting agencies.
FA9-91	Page 4C-9, Par. 5 Impacts on Groundwater. How close do the springs and wells have to be to the pipeline for consideration in a monitoring plan?	FA9-91	One hundred feet. See revised Chapter 4C.
FA9-92	Page 4C-11, Par. 3 Staging areas should be required to have a spill plan developed and spill abatement materials on hand.	FA9-92	Comment noted. No response required.
FA9-93	Page 4C-11, Par. 4 Silt fences and haybale filters are only abatement measures and will not prevent the flow of silt-laden water into streams. The project should be prepared to meet State water quality standards as a contingency measure.	FA9-93	The appropriate state permitting agencies are free to impose any additional measures they feel are required to protect water quality.
FA9-94	Page 4C-12, Par. 3 The "dry crossing technique" used to cross minor streams should not dewater the stream channel for more than the permitted right-of-way width.	FA9-94	Thank you for this information. No response required.
FA9-95	Page 4C-12, Par. 6 Page 4C-14, Table 4C-5 Crossing Procedures. Seven or eight Moyie River crossings are identified as major river crossings requiring site specific construction plans that will be submitted to FERC for review and approval. Moyie River crossing #7 is the crossing not included. Of the Moyie River crossings, we find that crossing #7 to be one of the most sensitive crossings due to a wetland and pond water on one side of the river and a long sustained steep slope on the other side of the river. We would highly recommend this crossing be designated and reviewed as the other seven crossings.	FA9-95	The staff defines a "major river crossing' as one that is greater than 100 feet wide. The proposed Moyie River Crossing No. 7 is less than 100 feet wide. However, PGT has prepared site-specific construction and restoration plans for all eight crossings of the Moyie River pursuant to DEIS Recommendation No. 25.

FA9-95 (cont.)	For each of the crossings, an existing condition profile should be completed in order to return the affected area to an "as is" condition upon completion of the project. The profile should include the wetland as well. Also, on table 4C-5, Moyie River crossing #1 is likely to occur near milepost 0.3 (table has 9.3)		
	Page 4C-13, Par. 2		
FA9-96	This paragraph recognizes that hydrostatic test waters may have to be tested prior to discharge. Measures could be included here that address situations where State water quality standards are not met following testing.	FA9-96	This issue is best addressed by the appropriate state permitting agency.
	Page 4C-13, Par 5 Page 4F-6, Par. 1		
FA9-97	Increased Risk of Erosion and Sedimentation. There is no mention of actions which might mitigate the effects of construction at the eight Moyie River crossings. Instead, the mitigation mentioned is another alternative whose effects may be greater for other resources. Camp Nine should be viewed as an alternative and treated as such, not as mitigation.	FA9-97	The Camp Nine Alternative has been expressly identified by the staff as an Alternative route, and not as potential mitigation. The need for mitigation is addressed in Chapter 6, Recommended Mitigation Measure No. 25.
	Page 4D-8, Par. 4 Page 3L-7 Page 3L-12		
FA9-98	The proper name is Crooked River National Grassland, not Grasslands. This error also occurs on pages 3L-7 and 3L-12.	FA9-98	Comment accepted.
	Page 4D-8, Sec. 4D, Par. 5		
FA9-99	"...Where the project route crosses the Deschutes National Forest, access to Newberry Crater, which would be the center of Newberry National Volcanic Monument, would be temporarily disrupted by the construction of the pipeline." This sentence could read: "...Where the project route crosses the Deschutes National Forest, access to Newberry Crater, which is in the newly designated Newberry National Volcanic Monument, would be temporarily disrupted by the construction of the pipeline. Blasting on the portion of the construction route that passes nearest to Lava River Cave would disrupt access to the cave temporarily also. Measures must be stated and approved in Plans of Operation that would minimize effect on other Forest users." Some mention needs to be made as to how coordination with other utilities will be done since there are some in the area that could be affected by the pipeline construction.	FA9-99	Comment accepted. See revised Chapter 4D. Coordinating pipeline construction with the owners of the utilities lines that would be crossed is a standard construction practice. See addition to Chapter 2 in "General Construction Procedures".
	Page 4E-3		
FA9-100	"Rare plant and wildlife surveys were conducted along the proposed PGT Project route during March-May 1990." This time of year may be inappropriate for sensitive plant surveys. Other surveys may be necessary to meet Forest Service Regulations on Rare Plants.	FA9-100	Surveys were conducted between March and November of 1990. See revised Chapter 4E.

Page 4E-5

FA9-101 Impacts and Mitigating Measures common to the PGT and Altamont Projects.

All PGT/PGE Loop Construction crossing public lands administered by the Forest Service will comply with the Forest Land and Resource Management Plans with seasonal restrictions for wildlife, special wildlife, vegetation, soils and water, noxious weeds, fire restrictions as set forth in the Standards and Guidelines, unless waiver is obtained and signed off by a Forest Supervisor of each National Forest crossed.

Page 4E-5, Par. 2, Sent. 2

FA9-102 "As previously discussed in Chapter 3E, due to the different wetland identification methods used for PGT and Altamont, wetland impacts for PGT have more likely been underestimated and wetland impacts for Altamont have most likely been overestimated."

Comment: A wetland must be completed on the NFS lands. Loop #8 crosses one and is very close to two possible vernal pools on the Modoc and Shasta National Forests. Who will prepare the application for the 404 license?

Page 4E-5, Par. 5

FA9-103 Last Sentence should read: However, the Forest Service will require planting of tree seedlings...

Page 4E-6, Par. 2

FA9-104 Noxious Weeds. Add: Hay or straw used for drainage/erosion control must be obtained locally.

Page 4E-6, Sec. 4E

FA9-105 Wildlife and cattle are going to have to negotiate the open trench. Mitigation measures such as ramping will be considered and approved by the Forest Service in a COM Plan.

Page 4E-6, Par. 5, Sent. 1

FA9-106 "In order to minimize impact on bird species that would utilize the permanent right-of-way for breeding purposes, we recommend that the applicants not conduct vegetation maintenance of the right-of-way prior to August 1 of any year, and vegetation maintenance be performed no more frequently than once every three years."

Comment: There are several factors which would dictate the timing of maintenance on right-of-way over the NFS lands, such as fire danger, soil conditions, timing for slash disposal. Minimizing the impact to bird species would not be one of the factors unless the species is listed as sensitive, threatened, or endangered.

FA9-101 Thank you for this information. No response required.

FA9-102 PGT and/or PG&E, as the applicant of a private project is responsible for preparing any Section 404 permit applications that may be required.

FA9-103 The referenced paragraph already contains this information.

FA9-104 This issue is discussed in Chapter 4B.

FA9-105 Thank you for this information.

FA9-106 Thank you for your comment. On NFS-system land, the Forest Service may establish restraints on right-of-way maintenance activities as it deems necessary.

FA9-107	Page 4E-8, Par. 2 This portion of the EIS states that no wetland "loss" would occur. Has the threat of the loss of the water table through trenching or fracturing of impermeable bedrock or soil been considered? In paragraph 3 the threat is is recognized but long term impacts not addressed.	FA9-107	In the event that a perched wetland is "breached" during construction, the applicant would be responsible for re-establishing the impermeable layer.
FA9-108	Page 4E-11, Par. 1 Annual ryegrass may not be the best choice in all cases. To ensure adequate and rapid revegetation of wet areas, a revegetation plan will be completed by the company and approved by the Forest Service.	FA9-108	Thank you for this information. No response required
FA9-109	Page 4E-11, Par. 3 Long term activity on the right-of-way will include monitoring. Continuing compaction due to vehicle traffic should be evaluated. (Forest Service realizes FERC does not have most current information on Special-Status species from PGT. We include deficiencies here for documentation purposes.)	FA9-109	Thank you for your comment. No response required.
FA9-110	Page 4E-12, Par. 1 Special-Status Plant Species. States that "two FS-listed sensitive plant species may occur along the pipeline route.....". The EPS for PGT-PG&E revealed that five special status plants were encountered in Idaho (p. 4-1). Two of these plants are FS-listed sensitive, which would require mitigation consideration, and the other three are listed as Watch or Review. These special status plants, along with those found in Washington, Oregon and California, are listed in Table 4.1-1 in the EPS report. This table is current and contains correct information as compared to Table 4E-2 in the DEIS, p. 4E-14.	FA9-110	The staff draws the commentors attention to the fact the definition of "special status species" contained in PGT's EPS differs from that used by the staff in the DEIS. PGT's definition includes Natural Heritage Program - listed species (Watch or Review List), where as the staff does not. Table 4E-2 and Appendix E-1 have been revised to incorporate the appropriate information from PGT's EPS.
FA9-111	Page 4E-12, Par. 6 Grizzly Bear. States the construction of the pipeline would disturb 329 acres of potential grizzly bear habitat (Table 4E-3). The project does not occur within any grizzly bear unit identified in the grizzly bear recovery zone.	FA9-111	Comment accepted. See revised Chapter 4E.
FA9-112	Page 4E-14, Table 4E-2 Assessment of Impacts on Special-Status Plant Species Along the PGT Route. Oregon Special-Status Plants. Astragalus peckii was found along the pipeline right-of-way between M.P. 525 to 530 during PGT's plant survey in 1990. Impact from pipeline expansion activities is expected and mitigation measures were proposed in PGT's final plant survey report. Some statement should appear here referring to those findings and recommendations.	FA9-112	Comment accepted. See revised Chapter 4E.
FA9-113	Add Botrychium pumicola, which was found on the Chemult Ranger District on the Winema National Forest during 1990, and extensively on the Crescent Ranger District on the Deschutes National Forest during 1990 in habitats similar to those found along the existing PGT pipeline right-of-way. Add the plant to Appendix E-1 also.	FA9-113	Staff disagrees, as PGT surveyed the Area of Potential Affect along its proposed project during 1990 and did not locate any individuals of this species.

FA9-114 Mimulus jepsonii does not occur just near high mountain lakes. It is apparently widespread across the Deschutes and Winema National Forests, and potential habitat for the plant could occur within the existing PGT pipeline right-of-way, because the plant occupies disturbed sites. The plant should be looked for during plant surveys in 1991 (see comment below).

Page 4#-14, Table 4E2

FA9-115 Last Line: Mimulus Jepsonii--acres of potential habitat shows 0 acres. This is incorrect. Mimulus has been located extensively on Crescent Ranger District, Deschutes NF, in same type habitat.

Page 4E-14, Table 4E-1

FA9-116 Comment Section. We notice that no comments are made concerning the positive sighting of Astragalus peckii in Klamath Co. and that no habitat for Mimulus Jepsonii is found along the pipeline. Mimulus Jepsonii is found on disturbed pumice soils, making the pipeline on the Winema prime habitat. We recommend adding a comment about the Astragalus peckii and further comments upon mitigation (see comments above and below).

Special-Status Plant Species. Table lists two special status plants for Idaho. The information is outdated. The most current information is present in the EPS for the PGT/PG&E report. The DEIS and the EPS contain contradicting information. The DEIS should be referring to the comprehensive survey and complete information found in the EPS report.

FA9-117 The symbol # is used throughout this table. There is no reference as to what it means.

Page 4E-17, Table 4E-2

FA9-118 Comment: Eryngium mathiasiae, Mathias' coyote-thistle is listed as Sensitive by the Forest Service.

Page 4E-23, Par. 4

FA9-119 Harlequin Duck. The Harlequin Duck breeds at very few sites in northern Idaho, so the crossing of the Moyie River is proportionately fairly significant. These impacts can be mitigated provided a limited operating season outside of their breeding season is used, and the island, as noted, is protected.

Page 4E-31, Sec. 4E, Par. 6

FA9-120 "...all this vegetation would be allowed to regenerate..." Planting (where appropriate) and seeding will be required for National Forest System lands in COM Plans.

Page 4E-33, Par. 1 & 4

FA9-121 The first paragraph on this page states "These vegetation types (i.e. Grassland vegetation types) are widespread and abundant in Oregon; therefore impacts are less than significant." Paragraph 4 on the same page states, "Disturbances of 6.3 acres of bluebunch wheatgrass-Sandburg bluegrass prairie is a significant impact." These statements appear to be contradictory.

FA9-114 Comment noted. No individuals were found during PGT's 1990 surveys. See revised Chapter 4E.

FA9-115 See response to Comment FA9-114.

FA9-116 See response to Comment FA9-110 and FA9-115.

FA9-117 The symbols # and FS are used interchangeably, and are used to indicate a Forest Service - listed sensitive species.

FA9-118 This information is already indicated in Table 4E-2 of the DEIS. However, please note the revisions to Table 4E-2.

FA9-119 Thank you for your comment. No response required.

FA9-120 Thank you for this comment. Please see Chapter 4B for a discussion of revegetation techniques.

FA9-121 The first paragraph referenced refers to the general vegetative types crossed by PGT's proposed facilities (e.g., lodge pole, pine forest, ponderosa pine forest, etc.) while the second statement referenced refers to a special native plant community. Therefore, these statements are not contradictory.

Page 4E-33

FA9-122 Special-Status Plant Species. Change to correct number, to account for additonal species included in list. Three of the 10 are listed as sensitive by FS.

Page 4E-33, Par. 1

FA9-123 Special-Status Plant Species. Refers to special status plants shown in table 4E-2. Mimulus Jepsonii is indicated as no habitat. This is incorrect. Much of the route on Crescent District is Mimulus habitat. Should also survey for: Botrydium pamicola (see comment above).

Page 4E-33

FA9-124 Special Status Wildlife Species. Closure restrictions as stated in Forest Service Land and Resource Management Plans and COM Plans will be adhered to.

Page 4E-33, Sec. 4E, Par. 6

FA9-125 "...Four to five Townsend's bats hibernate in Lava River Caves Park..." This should read: "...hibernate in the west arm of Lava River Cave. The east arm is used as feeding grounds for an unidentified species of bats, although they do not apprear to hibernate there."

Page 4E-36, Sec. 4E, Par. 1

FA9-126 There are no mitigation measures described for the Lava River Cave situation. The pipeline construction will not directly affect the bat hibernicula, but we would like a bat survey done before and after blasting to see how it may have affected the bat population of Lava River Cave--Townsend's bats and other species included.

Page 4E-41

FA9-127 Important Habitat for Game Species- Mule Deer. Closure restrictions, as stated in comments above, will be adhered to.

Page 4E-41, Par. 6

FA9-128 The EIS listed narrow migration corridors on the Deschutes NF between MP 474 and MP 475, MP 479 and MP 480, MP 482 and 484, and MP 485 and MP 486. To minimize disruption of migratory patterns, "we (DEIS) recommend that PGT not construct within these migration corridors during the migration seasons (April 1 to July 1 and October 15 to December 1). Construction within wider migration corridors would not affect large numbers of deer because construction activities would be confined to small areas and completed in a short time."

Our concern is for the wider corridors. If the trench is left open in these areas for 1 or 2 days during the peak migration period, the mule deer migration would probably be disrupted. In a conversation with Steve Roberts on January 16, 1991, he explained that there had been tentative agreement with Oregon Department of Fish and Wildlife (ODFW) that crossings would be constructed in the open trench every 400 yards along the trench. The crossings would be

FA9-122 Please see revised Chapter 4E.

FA9-123 See revised Table 4E-2.

FA9-124 Thank you for this information. No response required.

FA9-125 Comment accepted.

FA9-126 The Forest Service may impose on PGT whatever survey requirements it deems necessary. However, given the Forest Service's concurrence with our determination of no direct effect, we do not see the need for the FERC staff to impose such a requirement.

FA9-127 See response to Comment FA9-124.

FA9-128 Thank you for this information. No response required.

FA9-128 (cont.) constructed of earthen ramps. The top surface would be about 80 feet wide. The crossings would allow deer, as well as other animals, to cross, and the ramps would permit animals which may have fallen in the trench to walk out. Additionally, the pipe lying in place on the surface next to the trench, would have breaks in it every 400 feet.

Page 4E-41, Par. 7

FA9-129 The EIS listed narrow migration corridors on the Deschutes NF between MP 474 and MP 475, MP 479 and MP 480, MP 482 and 484, and MP 485 and MP 486. To minimize disruption of migratory patterns, "we (DEIS) recommend that PGT not construct within these migration corridors during the migration seasons (April 1 to July 1 and October 15 to December 1). Construction within wider migration corridors would not affect large numbers of deer because construction activities would be confined to small areas and completed in a short time."

Our concern is for the wider corridors. If the trench is left open in these areas for 1 or 2 days during the peak migration period, the mule deer migration would probably be disrupted. This will be addressed in COM Plans.

FA9-129 See response to Comment FA9-128.

Page 4E-43, Par. 1

FA9-130 Pronghorn antelope are present year-round on the Grassland between Mud Springs Creek and the Madras compressor station. Closure restrictions, as mentioned in comments above, will be adhered to.

FA9-130 See response to Comment FA9-128.

Page 4E-44

FA9-131 Special-Status Plant Species. Comment: Eryngium mathiasiae, Mathias' coyote-thistle, currently listed as a Forest Service Sensitive plant was not addressed. The pipeline crosses an area with Coyote-thistle at MP 680.88 which must be addressed.

FA9-131 The FERC's EIS only addresses federally listed or proposed threatened and endangered species in the State of California. Please refer to the CPUC's DEIR and FEIR for a complete discussion of the environmental impacts associated with the construction of PG&E's non-jurisdictional facilities.

Page 4E-47, Par. 3

FA9-132 Comment: It should be mentioned that the pipeline will run adjacent to an active Bald eagle nest and pilot tree.

FA9-132 See revised Chapter 4E.

Page 4F-6, Par. 1

FA9-133 Minimize Clearing. In addition to a site-specific construction, restoration, mitigation, and monitoring plan for each of the Moyie River Crossings, a site-specific enhancement plan to improve fish habitat in the Moyie River and a plan to provide for fish passage from the Moyie River into the Meadow Creek drainage beyond the existing fish blockage should be discussed in the EIS. PGT, thus far, has been willing to develop an enhancement project in the Moyie River Valley. Considering the current condition of much of the reach of the river above their last crossing, there could be a net benefit to the river through enhancement efforts.

FA9-133 See revised Chapter 4F.

Page 4G-3, Par. 2

FA9-134 The EIS does not substantially measure or discuss social effects, i.e. crime, attitudes, community cohesion, social conflicts, etc. or direct economic effects, i.e. jobs, income created, etc.

FA9-134 To discuss what degree the project may result in these social effects would be speculative at best. As stated in the DEIS concerning impacts on public services, these impacts would vary from community to community depending on the number of non-local workers (and any accompanying family members) that temporarily reside in each community, how long they stay, and the size of the community. Although these factors are too variable to accurately predict the severity of the impact, these effects would be short-term and therefore, are not expected to be significant.

Page 4G-4, Table 4G-1

FA9-135 Table 4G-1 lists increases in temporary population. Looking at the map it seems certain cities, such as Madras, Bend, and Klamath Falls will serve as a hub for activities both North and South, and therefore will have larger impacts.

Page 4N-1

FA9-136 Environmental Consequences: Air Quality. The document needs to discuss the potential impact of the project on PM-10 levels within the urban growth area of Klamath Falls (the nonattainment area) and on Crater Lake National Park (Class I air shed). It also needs to discuss the potential impacts on the local communities (see comment 3H). It should also discuss the impacts of smoke from the burning of right-of-way debris on the various highways in the area, such as Highway 97, Sprague River Highway, the Williamson River Road, the Squaw Flat Road, and Highway 140.

Mitigation measures will be agreed to and approved in COM Plans.

Page 4H-1, Sec. 4H

FA9-137 We think it should be mentioned somewhere in this chapter that smoke from slash burning would have a temporary effect on air quality. A mitigation measure to be added: Burning will be done in accordance with State and Federal regulations.

Page 4H-2, Par. 5

FA9-138 Impacts from Compressor Station 11 (and several others in Oregon, Stations 12 and 13) are never discussed. Discussions among Bob Bachman (Region 6 Forest Service Air Quality Specialist, Portland, OR), Larry Miller (Oregon D.E.Q. Air Quality, Portland, OR) and Harry Clagg (Ochoco National Forest, Prineville, OR) determined that Compressor Station 11 does indeed exceed federal PSD thresholds. It therefore should be included in Table 4N-1 EXISTING AND PROPOSED COMPRESSOR STATION AIR EMISSIONS and discussed in the narrative of the section on IMPACTS AND MITIGATION MEASURES SPECIFIC TO THE PGT PROJECT. The present PSD Permit Request being considered by Oregon's DEQ shows that Compressor Station 11 has existing NOx emissions of 538 tons/year and is expected to increase by 59 tons/year for a total of 597 tons/year.

There is a lack of discussion on mitigation measures for those stations within the significant deterioration regulations. Some discussion of Best Available Control Technology (BACT) and an estimate of the likely hood of success.

Page 4I-1, Sec. 4I

FA9-139 Some statement should be made in this chapter that there will be no increase in operation noise at Compressor Station No. 12.

Page 4I-2, Par. 1, Sent. 6

FA9-140 "To ensure that PGT's noise design criteria would be achieved, we recommend that PGT file noise analyses with the Commission for its proposed compressor additions prior to the issuance of the final EIS."

FA9-135 The progression of the construction process would cause the personnel to disperse throughout the area covered by each spread. Therefore, any analysis of impacts on any community would rely on variables that would make it purely speculative.

FA9-136 Thank you for this information. See revised Chapters 3H and 4H.

FA9-137 See response to Comment FA9-136.

FA9-138 See response to Comment FA9-57.

FA9-139 Comment noted.

FA9-140 PG&E does not plan to install additional compression at the Tionesta Compression Station.

FA9-140 (cont.) Comment: Tionesta Compressor station (MP 637.1) is within the Modoc National Forest. Will it be expanded? The EIR did not address.

Page 4J-1, Par. 2

FA9-141 Many of the roads to be utilized on National Forest are low standard roads. Increased traffic and large vehicle sizes could cause damage or require reconstruction and upgrading.

Page 4J-2, Par. 1

FA9-142 A COM Plan will be completed that addresses increased traffic on Forest Development Roads.

Page 4L-4, Par 1

FA9-143 Minimize Clearing. In addition, the planting of large balled conifers should be part of visual resource plan to be approved by the Forest Service or BLM.

Page 4L-4, Par. 3

FA9-144 Minimize Stream Crossing Impact. Add the statement, as in the road crossings: A screen of trees should be left in place or planted across the right-of-way at river crossings in forested areas.

Page 4L-4, Par. 7

FA9-145 MP 0.2-13.6' VQO: Retention. The area along the Eileen Road is also to be managed for the visual quality objective of retention. Therefore, correct MP 0.2-13.6 to read 0.2-20.1. This is the same as along the Moyie River Road.

Page 4L-4, Par. 7
Page 4L-5, Par. 1

FA9-146 Short term mitigation of the visual effects would be more positive if signing was strategically placed to advise the public concerning of the short term impacts to the area. This does not really improve the visual impact but would reduce confusion and misunderstandings about the changes to their recreation area.

Page 4L-5, Par. 5

FA9-147 MP 465.0-511.2, VQO: Retention. In order to assure Retention of visual quality, a COM Plan will be completed by PGT and approved by the Forest Service.

Page 4L-7

FA9-148 MP 519.5, VQO: Retention. The only additional clearing of trees at this location would be for temporary workspace. A COM Plan will be approved by the Forest Service to assure Retention of visual quality. This will minimize the long-term impacts; short-term impacts would not be significant.

FA9-141 Thank you for this information. No response required.

FA9-142 See response to Comment FA9-141.

FA9-143 Comment accepted. See revised Chapter 4L.

FA9-144 Comment accepted. See revised Chapter 4L.

FA9-145 Change made. See revised Chapter 4L.

FA9-146 This measure is better suited for the COM Plan because our required mitigation applies to sites primarily on federally managed land.

FA9-147 Comment noted. No response required.

FA9-148 Comment noted. No response required.

Page 4M-1, Par. 1 FA9-149 Last sentence should read: Mitigative measures "will" include rerouting the project, etc....	FA9-149 Comment accepted. See revised Chapter 4M.
Page 4M-2, Par. 1 FA9-150 DEIS needs to state more clearly that FERC must submit cultural resource site determinations of NRHP Eligibility to SHPO's prior to consulting with same for Determinations of Effect. Include appropriate Federal agencies in consultation.	FA9-150 See revised Chapter 4M.
Page 4M-2, Par. 4 FA9-151 Comment: The field survey is not complete for the APE.	FA9-151 Phase 1 testing has been completed for the APE as defined in the text. The FERC staff acknowledges that the further testing recommended in the Phase 1 report has not been completed, and that certain areas such as laydown yards have yet to be defined. Survey will be required in these areas.
Page 4M-2, Par. 5 FA9-152 Comment: Applicants must be required to meet these conditions in order to comply with the NHPA. Recommending that they do so is not sufficient.	FA9-152 Thank you for your comment. The staff's recommended condition is sufficient to ensure that the FERC complies with its responsibilities under Section 106 of the NHPA.
Page 4M-3, Par. 2, Sent. 1 and 2 FA9-153 Comment: Sentences are inconsistent. The entire APA has not been inventoried because areas outside of the pipeline route are not included in the inventory.	FA9-153 The APE as defined in the Phase 1 report has been surveyed. PGT is not required to survey areas outside the APE. Survey will be required of those areas (such as laydown and pipe storage yards) which were not defined at the time of the original survey.
Page 4M-3, Par. 5 FA9-154 Paragraph needs to indicate that there are still x number of cultural resource sites outstanding to be submitted to SHPO's for Determination of NRHP Eligibility.	FA9-154 Comment accepted. See revised Chapter 4M.
Page 4M-10, Par. 5 FA9-155 The survey of the APE for paleontological resources will be completed and analyzed in a NEPA framework prior to construction activities.	FA9-155 Thank you for this information. No response required.
Page 4M-12, Par. 2, 3 FA9-156 Rather than discussing impacts or effects, once again the statement is made or implied that surveys are needed and formations are known to contain paleontological resources (e.g., John Day Formation). Mention of how PGT would coordinate with other utilities during construction, and possible cumulative effects of more that one project occurring could be mentioned here.	FA9-156 Paleontology impacts are discussed on page 4M-10.
Page 5-1 FA9-157 Cumulative impacts. It is difficult to address cumulative effects, especially when your analysis basically consist of qualitative information. However, throughout the document, there are numerous references to cumulative water quality impacts to the Moyie River (i.e., 4C-13, Par. 4) but there is no	FA9-157 Comment noted. See revised Chapter 5.

FA9-157 (cont.)	reference to it in cumulative impacts section. You may have to quantify the existing water quality condition and also state how much you expect to change for for how long. The topic of water quality is very important as relates to the Moyie River but which is handled rather vaguely. No reference is made to the necessary coordination with other utilities, such as phone lines, electrical facilities, etc.		
	Page 5-2, Par. 2		
FA9-158	For the PGT portion of the line it mentions only three stations having increased emissions and dismisses them as not significant. All stations will ave increases associated with the increased volume of an additional line to pump, as well as the increased compressor capacity at the three stations mentioned. There should be a cumulative effects discussion of the compressor stations as they effect local air sheds in conjunction with other emission sources such as urban area traffic and industry, agricultural burning, slash burning, and wood stove smoke. The central Oregon and Klamath Basins are two areas where the transmission line NOx emissions are bound to exert a cumulative impact.	FA9-158	Staff disagrees with this statement. Any increases in emissions from existing stations will be negligible, and these station would be required to operate within the terms set by their PSD permits.
	Page 6-9, Par. 2, Table 6-1		
FA9-159	The discussion on air quality and Table 6-1 needs to be updated to reflect at least 3 compressor stations having significant increases in NOx emissions. There is no mention of required use of BACT for reducing NOx emissions from the compressor stations in Oregon.	FA9-159	The referenced paragraph and table already contain this information.
	Page 6-31, #17		
FA9-160	Replace "should" with "will".	FA9-160	Comment noted.
	Page 6-32		
FA9-161	FERC Staff Recommended Mitigation Measures for the PGT Project. Somewhere in this section the following statement should appear: PGT shall comply with the Standards and Guidelines of the Land and Resource Management Plan of each National Forest involved in the PGT Natural Gas Pipeline Project.	FA9-161	Comment noted. See revised Chapter 6.
FA9-162	Coordination should be done with other utilities in the vicinity of the pipeline. Any bedding material for the pipe, fill needs, etc., should be obtained from the immediate area to avoid introducing species into the area that are not compatible with existing species or introducing noxious weeds. Any straw or mulch material used to control erosion should also be obtained from the immediate area. PGT must perform a snag analysis and develop COM Plans for snag replacement. Many areas on the Deschutes and Winema National Forests are close to the minimum for big game cover. A COM Plan will be developed by PGT and approved by the Forest Service to maintain adequate cover.	FA9-162	The staff believes that the development and imposition of these recommendations is best left to the Forest Service's permitting process, as agreed to by the FERC staff and the Forest Service in our coordination meeting held in Bend, Oregon on February 28, 1991.

FA9-162 (cont.) Forest Service requests PGT to review their 30' offset requirement for all the new pipe. First drawings we saw showed a 20' offset except in lava rock areas. Forest Service prefers a 20' offset in most areas of the pipeline.

The crossing of highway 97 is on Gilchrist timber company land. The Forest Service requests treatment of this crossing similar to National Forest Land as most people believe they are viewing National Forest lands when driving down highway 97. A COM Plan would be agreed to for this section.

PGT will submit a plan for managing existing windrowed rock and new rock. This COM Plan will be approved by the Forest Service.

The scope of the expansion of Compressor Station No. 12, Deschutes National Forest, needs to be defined and arrangements made with the Forest Service for specific mitigation measures that might be needed concerning the owners in the nearby subdivision.

Page 6-33, Par. 31

FA9-163 The "FERC Staff Recommended Mitigation Measures for the PGT Project" number 31 is consistent with the recommendation to not construct within the mule deer migration corridors between mile posts listed in the above comment. COM Plans will be approved by the Forest Service for additional measures necessary to protect migration of mule deer, especially in the wider mitigation corridors.

Page 6-32, #40

FA9-164 Add sentence: Evaluations will be completed prior to clearing.

Page 6-34, Par. 4

FA9-165 Change first sentence to read: ......,PGT and PG&E "will" avoid these resources.

Add sentence: When it is impossible to avoid NRHP listed or eligible cultural resources, PGT and PG&E will conduct data recovery prior to site disturbance.

Page 6-36, Par. 3

FA9-166 It is unknown what cultural resources may lie under the pumice layer resulting from the Mt. Mazama eruption. Therefore, a COM Plan will address appropriate measures to ensure deeply layered cultural resources are protected as required by State and Federal law.

Page B-1-1, Appendix B-1

FA9-167 Erosion Control, Revegetation and Maintenance Plan. A final restoration plan (COM Plan) will be completed by PGT/PGE in conjunction with and approved by the Forest Service.

Page B-1-4, Part IV. C

FA9-168 "Test for soil compaction across the project right-of-way in agricultural areas."

FA9-163 Thank you for this information.

FA9-164 The word "construction", as used in the referenced mitigation measure, encompasses clearing and other earth disturbing activities. Therefore, no change is required.

FA9-165 The comment probably refers to Condition No. 40 versus Paragraph 4. See revised Condition No. 40.

FA9-166 Thank you for this information. No response required.

FA9-167 See response to Comment FA9-166.

FA9-168 See response to Comment FA9-167.

FA9-168 (cont.) Comment: Soil compaction is often a problem for tree and shrub development on forested lands. Tests for soil compaction should be run in National Forest System Lands where trees and shrubs will be planted.

Page B-1-5, V

FA9-169 Revegetation, A. General Requirements.

Comment: Soils on the NFS lands should be tested for various additives needed and applied to achieve an appropriate growth medium so revegetation will be successful.

FA9-169 This issue is adequately addressed in Chapters 4B and 6.

Page B-1-5, Part F

FA9-170 Comment: The Forest Service R-5 standards for "slope breakers" or water bars is as follows:

	Erosion Hazard Rating for Area		
% Slope	Low (feet)	Med. (feet)	High (feet)
1 - 6	400	350	300
7 - 9	300	250	200
10 - 14	200	175	150
15 - 20	150	120	90
21 - 40	90	70	50
41 - 60	50	40	25

FA9-170 The Forest Service may impose its own standards on the applicants when constructing across National Forest System lands.

Page B-1-8 A. VII.

FA9-171 Revegetation and rehabilitation plans must meet agency maintenance and results standards. Standards and length of term for PGT/PGE responsibility in ensuring adequate revegetation/rehabilitation will be determined through the Plans of Operation (Restoration Plan). Forest Service will approve Restoration Plan and term of liability.

COM Plans will be written by PGT/PGE and approved by the Forest Service for revegetation and rehabilitation.

FA9-171 See response to Comments FA9-168 and FA9-170.

Page B-1-9 E

FA9-172 Application of herbicides and other vegetative management of unwanted vegetation must conform to the Vegetative Management EIS and mediated agreement by the Regional Forester R-6, on public lands administered by the Winema, Ochoco, and Deschutes National Forests.

(Note to FERC: It is of utmost importance this reference is made to the Vegetative Management EIS in the FERC EIS. If this reference is not made, National Forests in Oregon will not be able to issue a Record of Decision to consent to the Grant based on FERC's EIS.)

FA9-172 Comment noted. See revised Appendix B-1.

	Page B-1-9, Part F		
FA9-173	Comment: The Forest Service will provide the percent cover standards by mile post for determining if revegetation is successful. It is stated that "The Environmental Inspector shall determine whether or not reseeding is required." The Forest Service Regional Liaisons along with the Environmental Inspector shall determine whether or not reseeding is required on the National Forest System Lands.	FA9-173	Thank you for this information. No response required.
	Page C-3-1, Item I-A-1		
FA9-174	The statement that staging areas will be located 50 feet away from the wetland edge, "where topographic conditions permit" may not produce affects desired. Perhaps leaving off "where topographic conditions permit" would leave a stronger statement capable of ensuring desired results.	FA9-174	The staff believes that its recommended procedures are sufficient to minimize environmental impact to the maximum extent practicable. No change is required.
	Page C-3-1, Item I-B-1		
FA9-175	It is unclear whether the 10 feet is to be measured from the high water mark or the low water level.	FA9-175	The 10 foot width is measured based on actual water condition at the time of construction.
	Page C-3-2, Item I-D-4		
FA9-176	The statement that stream crossings will be as perpendicular to the axis of the channel "as engineering and routing conditions permit" may not produce desired effects. Perhaps a stronger statement could be inserted.	FA9-176	See response to Comment FA9-174.
	Page C-3-5, Items D-2, 3		
FA9-177	Erosion control measures described here fail to discuss what size or intensity of climatic event they might be designed to deal with.	FA9-177	Erosion control procedures are designed to deal with climatic conditions reasonably expected to occur during construction.
	Page E-1-1, Appendix E-1		
FA9-178	The following species should also be considered: Astragalus howellii, Astragalus howellii var. howellii, Astragalus diaphanus var. diaphanus, and Astraglus diaphanus var. diurnus.	FA9-178	As previously discussed, these species do not meet the FERC staff's definition of "Special-Status Species".
	Page E-1-1, Appensix E-1.		
FA9-179	PGT Special-Status Plant Species. Astragalus peckii. Indicate that this species was found between M.P. 525 and M.P. 530.	FA9-179	Comment noted.
FA9-180	Mimulus jepsonii. The current taxonomy and status of this plant is being reviewed. The plant has a high probability of occurrence along the existing PGT right-of-way.	FA9-180	Thank you for this information. See revised Table 4E-2.
	Page E1-1, Appendix E-1		
FA9-181	Special status plant species that may occur along the pipeline...This table, which lists sensitive plants that may occur along the pipeline, is different from Table 4E-2 on page 4E-14. If the table in Appendix E-1 is true, then we are concerned that the following species were neglected during the survey: Silene nuda ssp. insectivora, Botrychium pumicola, Castilleja chlortica and	FA9-181	Appendix E-1 and Table 4E-2 have been revised to present consistent information regarding FERC - defined special-status plant species.

FA9-181 (cont.) Thelypodium brachcarpum; if Table 3 is true, then we are concerned that Periderdia erythrorhiza and Castilleja chlortica were neglected during the survey.

Page E-1-4, Appendix E-1

FA9-182 Comment: Lassen National Forest Botanist has stated that there are no known populations of Fritillaria eastwoodiae (Butte County fritillary), Fritillaria pluriflora, (Adobe lily), and Mimulus pygmaeus, (Pigmy monkeyflower) on the Shasta National Forest administered by the Lassen National Forest or the Lassen National Forest in the vicinity of the pipeline.

FA9-182 Thank you for this information.

Page E-1-5, Appendix E-1

FA9-183 Comments: Poa fibrata (Lassen County blue grass) has been delisted as a Forest Service sensitive plant. It is still a C2 candidate.

FA9-183 Thank you for this information.

Page E-1-5, Appendix E-1

FA9-184 Comment: Strepthanthus shastensis (Pitt River jewelflower) is given the Federal listing status of "R". What does "R" stand for? It is not listed in the key.

FA9-184 This is a typographical error. Please see revised Appendix E-1.

FA9-185 Site Specific Mitigation Measures to Consider for COM Plans in the Pacific Northwest Region. Note: This list is not complete and will be refined and added to while working with PGT:

General

A PGT/PG&E liaison will be designated for each Forest Service Regional Coordinator during the construction phase.

Page 2-3, Par. 3

On antelope winter range, fences must be reconstructed according to the following guidelines: Topwire: Not more than 40 inches above the ground. Bottom wire: Smooth wire at least 18 inches above the ground.

Page 2-11, Par. 5

Ochoco National Forest. Land management activities will be planned to achieve effective ground cover as defined by the following classes:

Soil Resource Inventory Erosion Hazard Class	Minimum % Effective Ground Cover, 1st Year
Low	20-30
Moderate	30-40
Severe	50-60
Very Severe	60-75

Soil Resource Inventory Erosion Hazard Class	Minimum % Effective Ground Cover, 2nd year
Low	30-40
Moderate	40-50
Severe	60-75
Very Severe	75-90

The erosion hazard class is defined and units mapped in the Soil Resource Inventory, Ochoco National Forest, Paulson, 1977.

Effective ground cover is defined as the basal area of perennial vegetation, plus litter and coarse fragments greater than 2mm sizes), including tree crowns and shrubs that are in direct contact with the ground. Exceptions may occur where specific projects meet erosion control objectives without meeting the ground cover objectives stated above.

Page 2-41, Par. 5

Integrated Pest Management (IPM) strategies will be used to manage pests within the constraints of laws and regulations, and meet Grassland, Deschutes, and Winema management objectives.

IPM strategies include manual, mechanical, cultural, biological, chemical, prescribed fire, and regulatory means. Select strategy through the environmental analysis process, and in compliance with the Regional Vegetation Management Environmental Impact Statement, 1988.

FA9-185 In coordination meetings between the FERC staff and representatives of the Forest Service, held on February 25, 1991 in Coeur O'Alene, Idaho, and on February 28, 1991 in Bend, Oregon, it was agreed that the information presented in Page 31 through 42 of the Forest Service's comment represented genuine issues of concern. In addition, all participants at these meeting agreed that it was best for the Forest Service to directly address these issues in its Forest-Specific COM Plans. The Forest Service and the FERC staff agreed that the FERC's OEIS adequately addressed these concerns, and that the OEIS's recommended mitigation measures (as revised by the Forest Service's comments) provided the Forest Service with ample authority to impose these site-specific conditions on PGT. However, the Forest Service requested that the FERC staff publish this information in order to provide both PGT and interested members of the public with notice as to the specific types of requirements that the Forest Service will mandate in PGT's COM Plans. As previously agreed to by the FERC staff and the Forest Service, we will not respond to these comments.

Pesticide application, if used, will conform with EPA regulations, label restrictions, and the Regional Environmental Impact Statement on chemical applications.

Page 3B-1, Oregon

Noxious weeds were not mentioned. The Chemult Ranger District, Winema NF, has no identified infestations of noxious weeds. Isolated occurrences of Canada thistle (Cirsium arvense), musk thistle (Carduus nutans), and possibly Scotch thistle Onopordum acanthium) have been noted throughout the Chemult Ranger District. Other species of noxious weeds probably occur on the District which have not yet been located. Numerous species of noxious weeds occur on lands adjacent to the District. Twenty-eight species of noxious weeds occur in Klamath County. The potential for a noxious weed problem developing on the Chemult District is very high.

Noxious weeds could be a problem on the Winema and Deschutes National Forests also. A noxious weed prevention plan should be written as part of the Plans of Operation for Forest Service approval (see comments 4B-7, Weed Control).

Page 3H-1

Environment Air Quality. There is no discussion of PM-10 particles nor is their any discussion on the impacts on Class I air sheds, such as Crater Lake National Park, if debris created by clearing the right-of-way is disposed of by burning. There is a requirement that project activities be conducted in such a manner that they meet the requirements of the Oregon Smoke Management Plan which is a part of Oregon's State Implementation Plan for implementing the Federal Clean Air Act.

Page 4B-1

Significant Impacts. FS requires compaction mitigation on all compacted areas that will not be permanent roads.

Page 4B-7

Weed Control. Early detection of invasion of weeds is essential. Inventory of the revegetated area is essential to insure weed species are not transported into the area by project activities. Prevention is the preferred method of weed control. At a minimum, PGT must develop procedures for cleaning equipment that are sufficient to prevent weed seed travel via dirt on equipment during both construction and revegetation phases. As a prevention measure, it is recommended that all equipment be washed before entering the project area.

If inventory identifies areas of noxious weed establishment, a Vegetative Management Plan and an analysis of the plan shall be prepared, consistent with guidance given by the Record of Decision (ROD) for the Environmental Impact Statement (EIS) for "Managing Competing and Unwanted Vegetation", USDA-Forest Service, Pacific Northwest Region, November, 1988, and subsequent Mediated Agreement with litigants.

Activities associated with this pipeline project, including site preparation by mechanical methods and other vegetation management, including the prevention of introduction of noxious weeds and control of noxious weeds, would require project design, mitigation and monitoring measures.

Page 4C-1, Par. 5
6-31 #10

Southeastern Oregon is currently experiencing a severe drought. Sources for all water needed for construction, fire fighting and miscellaneous must be determined prior to start-up.

Page 4C-3, Par. 4

Pumice soil is porous and the soil profile often lacks a restrictive layer. Careful consideration needs to be given to preventing contaminants such as spilled fuel from rapidly reaching the water table through pumice soil.

Page 4C-10, Sec. 4C, Par. 5

Will groundwater really be protected from potential contamination by staying 200 feet from private wells? Our soil is very permeable. Perhaps they should be required to designate a particular area that is for storing materials and refueling that is specifically altered to not allow liquids to be absorbed.

Page 4C-15, Par. 2

The Willow Creek (M.P. 421) stream crossing should be addressed in the DEIS. At our field review of the stream crossing on November 1, 1990 we discussed a number of protection and mitigation measures that the Forest would like to see implemented during the construction of the crossing. These included:

Timing: Due to concerns about sedimentation problems associated with working during high flow periods, the group agreed that scheduling construction for mid- August or September would provide the best degree of protection for fish habitat in Willow Creek. This will also lessen impacts on successful spawning of rainbow trout in the stream.

Fluming: It was agreed that a flume would be used to pass most of the stream flow around the actual construction activity as specified in Appendix C3 of the DEIS; FERC Stream and Wetland Construction and Mitigation for Minor Streams. This would also greatly decrease the potential for sedimentation during construction.

Hay Bales: Some type of sediment trap would be used on streambanks to trap sediment from upslope construction prior to it reaching the stream itself.

Junipers: Some of the junipers cut during ROW clearing would be stockpiled near the stream for use as bank revetment.

These points were agreed to by the group and re-affirmed in a telephone call between Dean Grover Forest Fisheries Biologist) and Steve Ahern on 2/1/91.

Timing, fluming and hay bales were all discussed in various sections of the DEIS. However, no mention was made that specifically dealt with the M.P. 421 Willow Creek Crossing. In fact, Willow Creek was hardly mentioned at all. This leaves it open to question whether the agreed upon measures will be incorporated into the plan of work during the actual construction and needs to be clarified.

In addition, there is a concern over the blasting proposed during the construction of the crossing. Just upstream of the site are a number of pools which hold good size trout. As identified in the environmental consequences section, these pools would be within the kill zone" of the blasts. These fish must be removed and relocated immediately prior to blasting, and block nets must be set up to prevent any addition fish from being killed.

Page 4E-5

Impacts and Mitigating Measures common to the PGT and Altamont Projects. All PGT Loop Construction crossing public lands administered by the Winema National Forest will comply with the Winema Land and Resource Management Plan with seasonal restrictions for wildlife, special wildlife, vegetation, soils and water, noxious weeds, fire restrictions as set forth in the Standards and Guidelines, unless waiver is obtained and signed off by the Forest Supervisor, Winema National Forest. After discussing the proposed project with Klamath Tribe Representatives, it appears that Land Management Plan restrictions will be implemented as mitigation measures.

Page 4E-6, Sec. 4E

Wildlife and cattle are going to have to negotiate the open trench. Mitigation measures should be mentioned such as ramping that will be done periodically along the pipeline (distance to be determined) to allow for their escape. PGT to write measure, Forest Service to approve.

Page 4E-33

Special Status Wildlife Species. Winema Land and Resource Management Plan requires seasonal operation restrictions for these wildlife that are present and/or found during construction of the Loop on those lands administered by the Winema National Forest. These species are listed in the Winema Land Management Plan. Waivers may be obtained under certain conditions as specified in the plan, and must be agreed to by the Forest Supervisor, Winema National Forest. This is not likely to occur and PGT should plan its project accordingly to restrictions set forth in the Winema Land Management and Resource Plan.

Page 4E-41

Important Habitat for Game Species- Mule Deer. Winema Land Management Plan requires seasonal restrictions for winter range and fawning habitat on those lands administered by the Winema National Forest as mitigation unless a waiver is obtained by PGT from the Forest Supervisor, Winema National Forest. The Land and Resource Management Plan sets forth conditions for obtaining these waivers. This is not likely to occur and PGT should plan its project accordingly to restrictions set forth in the Winema Land Management and Resource Plan.

Page 4E-41, Par. 7

In a conversation with Steve Roberts on January 16, 1991, he explained that there had been tentative agreement with Oregon Department of Fish and Wildlife (ODFW) that crossings would be constructed in the open trench every 400 yards along the trench. The crossings would be constructed of earthen ramps. The top surface would be about 80 feet wide. The crossings would allow deer, as well as other animals, to cross, and the ramps would permit animals which may have fallen in the trench to walk out. Additionally, the pipe lying in place on the surface next to the trench, would have breaks in it every 400 yards, coinciding with the ramps. In a conversation with Norm Behrens of ODFW, I confirmed that this tentative agreement between ODFW and PGT had been made. I support the use of earthen ramps for crossings and escape points from the trench.

Page 4E-43, Par. 1

Pronghorn antelope are present year-round on the Grassland between Mud Springs Creek and the Madras compressor station. This area is closed between December 1 and March 31, and no activities will be allowed without prior written permission from the Grassland District Ranger.

In this area, plugs will be placed in the trench while it's open to provide passage across the trench. The plugs would be about 80 feet wide and spaced about 400 yards apart. They would be covered with dirt, and constructed so that any animals that fall into the trench could climb back out. Gaps would be left in the line of pipe next to the trench.

Page 4H-1

Slash burning, if allowed, will require a permit issued by the Forest Service. Burning may occur only on days authorized by the State for smoke management control. Dust abatement will be done on federal roads where necessary as a safety measure. This will, in turn, help air quality.

Page 4J-1, Par. 2

The Grassland Land and Resource Management Plan contains the following standards and guidelines:

> Manage traffic as needed to control access due to structural limitations of the road, safety, or constraints imposed by resource (coordination), such as those to meet wildlife needs or ORV travel management needs.
>
> Restrict travel to a level that is compatible with the existing condition of a road if the road does not exist at an adequate and safe standard for the traffic expected to use it.

Page 4J-2, Sec. 4J, Par. 1

A mitigation measure for increased traffic on Forest Service roads could be to enter into a road maintenance agreement in which PGT should maintain the portions of the roads they use and restore all roads to original condition when they are done.

Page 4K-1, Sec. 4K

Public safety could be compromised if it we do not allow PGT to close access to the work site to the public. Forest Service lands are public lands and many uses take place on the same piece of ground. We may want to allow the contractor to close the work site for public safety. Also, traffic will increase on forest roads that are heavily used in the summers. Therefore, road closure proposals must be made in Plans of Operation so that other Forest users may have adequate and timely access to the Forest during construction.
The Forest Service wants to set up a monitoring program to monitor the effect of blasting on the stability of Lava River Cave. The cave would be closed to the public during blasting.

Page 4L-5, Par. 5

MP465.0-511.2, VQO: Retention. Last sentence should read: ...to less-than-significant levels, clearing and road crossing impacts will be minimized by reducing clearing to the existing rights-of-way and planting large trees (spading or containerized stock) within five days of crossing the road.

Page 4L-7

MP 519.5,VQO: Retention. The only additional clearing of trees at this location would be for temporary workspace. To reduce the appearance of straight line effect, we recommend that trees be replanted in different age classes with native local species. This will help meet the desired future condition of achieving diversity. This will minimize the long-term impacts and short-term impacts would be considered less that significant.

Page 6-29, Par. 2

The development of all site-specific plans listed in the Mitigation Measures which affect National Forest Lands in Region 6 must involve appropriate personnel from those Forests.

Chapter 6

Mitigation Meas. The Winema NF has concerns related to road use during construction of the pipeline. These concerns and requirements were previously submitted in November, 1990. Concerns are related to road use, overweight and overlength loads, public safety, road damage, and the need to evaluate the traffic and transportation needs. It is our intention that concerns and conflicts will be mitigated through request and issuance of Road Use permits, which will contain the specific road use requirements and mitigation measures related to roads.

Road Use Permits will be required for use on all Forest Development Roads on NFS lands.

Page 6-32

The following mitigation measures should be added for construction, operation, and/or maintenance within the Crooked River National Grassland:

1. All project plans must comply with Grassland Land and Resource Management Plan and applicable CFR's, unless written authorization is received from a responsible Forest officer.

2. In riparian areas, motorized use will be restricted to designated routes.

3. Protect and preserve, for American Indians, access to and use of traditional sites, the possession of sacred objects, and the freedom to worship through ceremonial and traditional rites. Coordinate location and protection of those areas with representatives of the Confederated Tribes of the Warm Springs Indian Reservation. Consider the plans and policies of other Federal, State, local, and American Indian tribal governments in plan implementation.

4. The following roads which cross or are adjacent to the pipeline are open year round: 51, 52, 5250, 53, 5350, 54, 57, 5920, 7850, 7960 and Highway 26. All other roads and off-road travel are subject to seasonal closures. The areas from the north boundary of the Grassland to Rd. 5920 and from Mud Spring Creek to Rd.

7130 are closed from November 15 to March 31. The areas from Rd. 5920 to Mud Spring Creek and from Rd. 7130 to the south boundary of the Grassland are closed from December 1 to March 31.

5. Meet State standards for temperature, turbidity, and water discharge.

The requirements for shade along streams will generally correspond to provisions for more than 80 percent of the shaded surface. Where this can not be attained, 100 percent of the potential for shade is the standard.

Existing temperatures above 58 degrees F. will not be increased. Temperatures at or below 56 degrees F. may be raised a maximum of 2 degrees F. Where stream temperatures exceed 58 degrees F., management activities will include objectives for reducing temperatures to levels that will improve fish habitat capability.

6. Allow no more than 10 percent cumulative increase in stream turbidity. Short-term deviations from this standard to accommodate emergency or other legitimate activities will comply with state requirements for notification and approval.

Page 6-32, Item 23

PGT's responsibility for noxious weed control will continue until the right-of-way is completely revegetated. The plan for noxious weed control must control noxious weeds and invader plants to prevent threats to adjacent agricultural lands or to prevent unacceptable loss of range productivity.

Page 6-32, Sec. 6, Par. 3

The following are suggestions to be added to the "...Mitigation Measures for the PGT Project" section.

Clearcutting in the right-of-way should be avoided across Forest Service lands. Forest Service representatives and PGT will agree on a site specific basis what trees may be left within the right-of-way, utilizing "shoo-flys", to facilitate construction as well as conservation of old-growth trees (especially ponderosa pine). Also, the edges of the right-of-way should be scalloped, both from clearing and planting, to soften the visual impact.

Borrow and disposal sites need to be identified. Cultural resource surveys and T/E surveys need to be completed for these areas.

Specific site drawings need to be developed for areas where the distance between the pipes is decreased to 20 feet, or where the terrain is steep or unusual in nature. These areas will be identified by the Forest Service, PGT will prepare the engineering drawings. One of these areas is the Northwest Rift zone fault that is within the boundaries of the Newberry National Volcanic Monument. There are several others on the Deschutes, Winema, and Ochoco National Forests.

Transportation/construction access plans need to be developed. Extra casing may be needed on roads of heavy traffic. Use of Forest Service roads needs to be coordinated and permitted. Some Forest Development Roads (FDRs) must be kept open to traffic during construction. Casing may be needed on some major paved roads. Forest Service will supply PGT with roads of concern, PGT will supply Forest Service with a plan on how to accommodate these road use situations. Roads of concern on the Fort Rock District, Deschutes NF, are FDR 18, 9710, 9720, 9724, 9735, 22, and county road 21.

Range allotment concerns: On the Deschutes, Winema, and Ochoco National Forests where applicable, fences need to be maintained to keep cattle away from area of construction and inside the allotment area, access needs to be maintained into the allotment for delivery of water on the Fort Rock District, Deschutes National Forest, and use of cattle guards by heavy equipment will need to be monitored. If damage to the cattle guards occur, an effective barrier will need to be maintained until cattle guard can be replaced by PGT.

PGT will replace existing allotment fence to the westside of the R/W as agreed in field review October 1990.

PGT must perform a snag analysis and consider measures for snag replacement. Timber sale contracts and OSHA requirements would be considered in this analysis and plan; as discussed on field review October 1990.

From the intersection of highways 58 and 97, a steep pummy slope the pipe extends up, is visible from this location. As discussed on the field review 10/90, PGT will plant or spade 30-50 large trees across from the intersection of highways (off-site) to reduce the visual impacts of the bluff. On the site of the pummy slope, as agreed on the field review, October 1990, PGT will lay fabric matting and mulching to encourage seeding of lodgepole.

The crossing at highway 58 will is visually sensitive and will require planting or spading in a large tree screen to retain visual quality from highway. Another option would be to extend additional length of casing 30-40' on each side of highway to reduce width of clearing; as agreed on field review, October 1990.

At the Northwest Rift Zone, PGT will construct line as a tie-in piece. Windrowed rock will be pulled in to help shape and lessen grade on steep hill just to north of fault zone. PGT will site design this area and use as a typical for other areas of similar construction. Right-of-way will be only minimally widened to east at fault zone. No additional fault will be disturbed or filled in, as agreed on October 1990 field review.

Edges in ponderosa pine on the Deschutes National Forest will be scalloped by leaving selected trees for 200-300'; then clear what is needed in temporary R/W for 800- 1000'; then leave tree clumps again. Shooflys will be used behind tree clumps to facilitate construction; as agreed on October 1990 field review.

Many areas on the Deschutes and Winema National Forests are close to the minimum for big game cover. Lodgepole within the right-of-way is healthier than that outside. Additional clearing of right-of-way may mean not treating adjacent stands that need silvicultural treatment, in order to maintain adequate cover. PGT and FS will consider impacts of moving pipe alignment in order to save some of healthy reproduction within existing right-of-way corridor (new pipe would lay 60-100 feet from existing pipe rather than 30 feet). This was agreed on field review, October 1990.

The crossing of highway 97 is on Gilchrist Timber Company land. However, the Forest Service requested PGT on the Field Review, October 1990 to treat this crossing as would be required on highway 58 since most people believe they are driving through Deschutes National Forest and do not realize they are on private land at that point.

PGT will remove as much as possible of existing windrowed rock and will not windrow new rock. Rock will be hauled off-site if necessary to prevent piling in right-of-way. Agreed with PGT on field review, October 1990.

The valve facility visible from FDR 18 on the Fort Rock RD, Deschutes NF, will be painted a dull or earth toned color. Tree screens will also be planted to ameliorate visual sensitivity from FDR 18. Agreed with PGT on field review, October 1990.

Visual impacts of the pipeline right-of-way from Lava Butte will need to be reduced from the current situation. Discussed on field review with PGT in October 1990. It will be necessary to set up a monitoring program to study the effect of blasting on bats and rock stability in Lava River Cave.

Breaks should be maintained between pieces of pipe as they are being fitted together to allow for passage of wildlife and cattle. Ramps should also be maintained in/across the trenches to allow for movement of wildlife.

Page 6-35, Par. 2, 3

We recommend that the monitoring plan be reviewed by Forest Service staff and that prior to commencement of construction that all cultural resource plans, surveys and reports, and mitigation plans and reports, monitoring plans etc. be reviewed by the staff cultural resource specialists of the National Forest units in Oregon upon which this construction would take place.

Page 6-35, Par. 5

In the formulation of any mitigation for NRHP listed or eligible site located on the Grassland, we expect that we will be consulted and that indirect effects of project mitigation will be taken into account as well.

Page 6-36, Par. 3

It is unknown what cultural resources may lie under the pumice layer resulting from the Mt. Mazama eruption. Therefore, a professional archeologist must be on site during excavation, on Crescent Ranger District, Deschutes National Forest, and other National Forest System lands as appropriate, to monitor and evaluate the soils below the pumice.

Page B-1-8 A. VII

Revegetation and rehabilitation plans must meet agency maintenance and results standards. Standards and length of term for PGT responsibility in ensuring adequate revegetation/ rehabilitation will be determined through the Plans of Operation (Restoration Plan). Forest Service will approve Restoration Plan and term of liability.

Page B-1-9 E

In addition to consulting, operations should include complete washing of equipment and vehicles before leaving an infested noxious weed area to an area of non-infestation to minimize the spread of known noxious weeds. Monitoring should follow rehabilitation seeding and planting to insure that new noxious weed infestations are minimized. Application of herbicides must conform to the Vegetative Management EIS and mediated agreement by the Regional Forester R-6, on public lands administered by the Winema, Ochoco, and Deschutes National Forests, and to the Winema and Deschutes National Forest Land and Resource Management Plans, and the Crooked River National Grassland Land and Resource Management Plan.

Page B-2-1, Appendix B-2

The following are the recommended seed mixtures for that portion of the pipeline crossing the Crooked River National Grassland. Since 75 percent of the acreage crosses land that has previously been plowed and seeded, there is one mixture for these areas and another for the native areas. The seed should be drilled.

Species	lbs/Ac.
Seeded Areas:	
Agropyron cristatus (Crested Wheat Grass)	4
Poa ampla (Sherman big bluegrass)	3
Dryland alfalfa	1
Native Areas:	
Agropyron spicatum (Bluegrass wheatgrass)	3
Poa sandbergia (Sandberg bluegrass)	2
Sitanion hystrix (Bottlebrush squirreltail)	2
Stipa thurberiana (Thurber needlegrass)	2

Page B-2-2, Item B

Recommended Seed Mixes. We would like to add the following seed mixes for nonriparian area where slopes are less than 10 percent.

Moist Site	PLS/acre
Serviceberry (Amelanchier alnifolia)	1
Rocky Mountain Maple (Acer glabrum)	3
Chokecherry (Prunus virginiana)	5
Columbia Brome (Bromus vulgaris)	7
Elymus canadensis	6

Dry Site	PLS/acre
Serviceberry	1
Red-stem Ceanothus (Ceanothus Sanguineus)	1
Rocky Mountain Maple	3
Chokecherry	5
Bluebunch wheatgrass (Agropyron spicatum)	8
Idaho Fescue (Festuca idahoensis)	6
Red Fescue (Festuca rubra)	6

These seed mixes will be used to encourage revegetation of native and browse species common to this area. Seed should be ordered well in advance of anticipated need as some native seeds are not readily available.

Page C-3-1, Sec. 1-C

Due to concerns about sedimentation problems associated with working during high flow periods, the M.P. 421 Willow Creek crossing must occur in mid- August or September to provide the best degree of protection for fish habitat. This will also lessen impacts on successful spawning of rainbow trout in the stream.

FA-56

Page C-3-2, Sec. 1-D-7

The M.P. 421 Willow Creek crossing must conform to the standards listed in this section.

Sincerely,

Robert L Sipe

ROBERT L. SIPE
Project Coordinator
PGT/PGE and Altamont Natural Gas Pipeline Project

cc:
Mr. Mark C. Kalpin, PGT/PGE Expansion Project
Mr. Laurence J. Sauter, Jr., Altamont Project
R-6 - Alice Mueller
R-1 - John Criswell
R-5 - Joyce Cloakley
R-2 - Ben Wallingford
BLM - Bill Dabbs

[U.S. Department of the Interior, Bureau of Land Management, Sacramento, California]

United States Department of the Interior

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MAR 7 1991

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MAR 13 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Mark Kalpin
Federal Energy Regulatory Commission
Environmental Compliance & Project
Analysis Branch, Room 7312
825 North Capitol Street, NE
Washington, D.C. 20426

Dear Mr. Kalpin:

Following are Bureau of Land Management comments on the PGT/PG&E Expansion Project Draft EIS (Oregon segment).

FA10-1 Page 3L-10:

MP 395 to MP 396. South end of Cow Canyon: This segment of the right-of-way is highly visible from Highway 97, a main travel corridor through the area. Reclamation of this exposed hillside should be given special consideration to restore the natural features of the site.

MP 434 to 456. An area of volcanic rock situated south of the Crooked River crossing, and east of the cities of Redmond and Bend, Oregon. This segment of the right-of-way is highly sensitive because of its close proximity to population centers. BLM administered lands in this vicinity receive heavy use from the general public. There is a high degree of public awareness with regard to uses of these lands. The right-of-way route along this segment extends through an area characterized by a thin soil layer over bedrock with random outcrops of volcanic rock. Shallow pockets of sandy soils are found in isolated pockets throughout the area. There remains a large windrow of volcanic rock and soil material, averaging 5-10 feet high, along this entire segment of right-of-way. This material resulted from the excavation of the existing pipeline. It is expected that a comparable amount of material will be produced during construction of this project.

FA10-2 Page 4B-9:

The document states that PGT will develop specific plans for construction through areas characterized by volcanic rock. These plans should consider disposing of waste rock and soil material accumulated along the

FA10-1 Because both of these areas don't have a VRM designation of Class I or II, the visual impact on them would be less than significant when analyzed according to the significance criteria established in the DEIS. We are aware, however, that the BLM considers some areas along the proposed route to be visually sensitive even though they have not been assigned a VRM of Class I or II, and that the BLM may place stipulations in their right-of-way grants to mitigate the visual impact the project would have on these areas. See revised Chapter 4L.

FA10-2 Comment accepted. See revised Chapter 4B.

FA10-2 (cont.) existing line as well as material expected to be generated by new construction.

PGT should also identify areas suitable for borrow of backfill soil material. It is expected that the rock removed from the trench would need to be replaced by soil material suitable for backfill purposes.

Borrow and stockpile off the right-of-way will have to be subjected to NEPA review, including cultural and botanical clearances. Specific authorizations must be obtained for off site activities affecting public lands.

Consideration should be given to preserving the surface soil material during construction so it may be available for replacement on the graded right-of-way surface upon completion. It is recommended that two - three inches of surface soil material including vegetative debris and brush be placed to the side of the right-of-way and saved for purposes of restoration. Upon completion of backfilling and recontouring, the surface soil material should be evenly dispersed over the right-of-way and seeded with native grass species.

FA10-3 Page 4D-8:

The document should state that the entire length of the existing right-of-way through Gilliam, Sherman, Wasco, Jefferson, Deschutes and northern Klamath County has, where it crosses public lands administered by BLM, been designated a utility corridor in BLM land use plans. The existing John Day River Canyon crossing and John Day River variation are both located in this corridor which occupies a "window" between Wilderness Study Areas.

FA10-4 Page 4F-5:

To avoid the consequences of an accidental spill of hazardous materials such as petroleum products into the John Day River, a boom should be located down stream from the crossing location. Absorbent pads or equivalent, should be available on site to quickly remove any hazardous material contained by the booms. PGT should develop a contingency plan to address the possibility of an accidental spill in the river.

There are no additional comments on the California segment.

Sincerely,

Ed Hastey
State Director

FA10-3 Comment accepted. See revised Chapter 4D.

FA10-4 Comment noted. The staff has recommended that PGT develop a Spill Prevention, Containment, and Control Plan for its project, which will adequately address this issue.

[Advisory Council On Historic Preservation, Washington, D.C.]

CP89-460-001
CP90-1375

Advisory
Council On
Historic
Preservation

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Reply to 730 Simms Street #401
Golden Colorado 80401

91 MAR 11 PM 4:06

March 1, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

REF: Draft Environmental Impact Statement (DEIS) for PGT/PG&E and Altamont Natural Gas Pipeline Projects

Dear Ms. Cashell:

Thank you for providing the Council with an opportunity to review the referenced document. We have the following observations to offer for your consideration in finalizing the EIS.

FA11-1 1. On page 1-14, it is incorrect to state that the Commission is required to ensure that historic and cultural resources are not adversely affected. The Advisory Council encourages the agency to develope alternatives or measures to avoid or reduce effects on historic properties, but in some cases there are unavoidable adverse effects. There are a fairly limited number of exceptions to the criteria of adverse effect (see 36 CFR 800.9(c), but these exceptions are applicable to specific kinds of historic properties and undertakings.

FA11-2 2. On page 1-17, it would be more appropriate to say that Council participates in consultation regarding project features that may affect National Register listed or eligible properties. Typically the agency, the State Historic Preservation Officer (SHPO), and the Council will consult together regarding the effects of a project. Consultation is an interactive process, and Council cannot by itself "provide consultation".

FA11-3 3. On page 3M-7, should the discussion of the Lake Britton Archaeological District be expanded? This district is significant for its potential contribution to archaeological and historical research, but it has other important values as well. For example, there are sites sacred to Native Americans that are still used in this area.

FA11-4 4. On page 3M-9 and 13, the concerns raised by Native Americans are very important and it is good that these concerns are summarized in this document. We assume that this effort represents the beginning of consultation with these groups and not the end.

FA11-1 Thank you for your comment. See revised Chapter 1.

FA11-2 Comment accepted. See change to Table 1-4.

FA11-3 The staff believes that the referenced discussion is adequate. The staff considers site-specific information concerning the location of cultural resources to be extremely sensitive. Therefore, the staff will only provide this information to agencies (such as SHPO's, federal land management agencies, and the ACHP) that are involved in the Section 106 process, as dissemination of site-specific to the general public carries with it the potential for disturbance and/or looting of these locations. The staff notes that the same rationale holds true in threatened and endangered species as well.

FA11-4 Your assumption is correct.

For certain sites and areas it is likely that more consultation will be necessary.

FA11-5 5. On page 4M-5, we will look forward to the documentation in the FEIS for the realignment proposed for the South Pass area. The South Pass area is, as is noted in the DEIS, a particularly sensitive area for historic properties.

FA11-6 6. Without determinations of the National Register eligibility for many of the properties and assessments of the project'e effects on these properties it is not possible to comment on the specifics of the project. On multi-state projects such as the PGT/PG&E and Altamont projects it is common for agencies to fulfill their Section 106 responsibilities through a Programmatic Agreement (PA) with Council, pursuant to 36 CFR 800.13. A PA can be developed with Council prior to the completion of site evaluation and determination of effect.

We look forward to continued correspondence on these projects and for a reasonable opportunity to comment on the undertaking under the process defined in our governing regulatione. If you have any questions or require the further assistance of the Council, please contact Richard Wilshueen of our staff at (303) 231-5320 or FTS 554-5320.

Sincerely,

Claudia Nissley
Director, Western Office
of Project Review

FA11-5 Comment noted.

FA11-6 Comment noted. The staff will consider the option of a PA; however, this determination is not necessary for completing the FEIS.

[U.S. Department of the Interior, Bureau of Land Management, Worland, Wyoming]

ORIGINAL

United States Department of the Interior

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CP90-1375

MAR 8 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Ms. Cashell:

The following reflects the comments of the U.S. Department of the Interior, Bureau of Land Management (BLM) with respect to the Altamont portion of the January 11, 1991 draft Environmental Impact Statement (DEIS). The BLM is an identified cooperating agency in the EIS effort and as such has worked extensively with the FERC staff and Altamont throughout preparation of the document. We appreciate the opportunity to again relate those issues of interest and concern to the BLM as it is the intent of the BLM to use the subject EIS to satisfy its National Environmental Policy Act (NEPA) mandates as well.

FA12-1 The BLM currently has pending for its disposition, an application for a right-of-way to cross public lands administered by the BLM for a large portion of the proposed Altamont pipeline in Wyoming and Montana. Prior to any right-of-way grant or notice for any construction to proceed and subsequent to any FERC approvals, BLM will require Altamont to complete and file for BLM approval, a detailed construction Plan of Development (POD) in addition to fulfilling any requirements identified to allow the involved federal agencies to meet their obligations under section 106 of the National Historic Preservation Act of 1996 (as amended) and section 7 of the Endangered Species Act.

FA12-2 The POD will be developed by Altamont in coordination with and approved by the BLM and will include construction details including but not limited to seed mixtures, locations of fill and spoil sites, topsoil handling, access, etc. Therefore, concerns relating to specifics within the control and purview of the BLM and the POD are not noted in the attached comments but will be dealt with through BLM's own administrative processes. Similarly, BLM reserves its prerogative to require minor route variations which may become necessary and resulting from completion of future studies and/or circumstances identified in

FA12-1 As the lead federal agency with jurisdiction over the undertaking, the FERC has a legal responsibility to comply with these two Acts. Our biological assessment, required by the Endangered Species Act, was submitted to the U.S. Fish and Wildlife Service on February 22, 1991. This document should be sufficient for all federal agencies with permit authorities. We are similarly proceeding to fulfill our obligation's under the National Historic Preservation Act. The Bureau of Land Management (BLM) and other appropriate federal and state agencies, and other interested parties, have been and will continue to be deeply involved with the FERC as this process proceeds.

FA12-2 Comment noted. Minor route variation's are envisioned to accommodate special-status biological resources, sites potentially eligible for the National Register of Historic Places, landowner needs/requirements, and other resource conflicts as identified in the Final EIS.

the final EIS (FEIS). Cooperation and coordination with affected state and federal agencies will continue through the POD and right-of-way grant process.

Similarly, a great deal of discussion regarding soils and vegetative rehabilitation has taken place between our respective staffs. In particular, those issues relating to the Altamont Construction and Rehabilitation Plan (ACRP) for Mileposts (MP) 511.0 to 540.8, were the subject of indepth discussion in Riverton, Wyoming on February 26, 1991. It is our understanding that resolution was attained and we expect those soils and rehabilitation issues to be reflected in the FEIS; therefore, any previous comments concerning soils and rehabilitation are likewise deferred. It is the opinion of the BLM that the ACRP for mileposts 511.0 to 540.8 was a very good effort and will be a good place to begin in Altamonts development of the POD.

BLM is required by policy to identify its preferred alternative for inclusion in any FEIS it is involved in. We respectfully request that the following wording be included in Chapter 6, "Conclusions and Recommendations" as BLM's indication of preferred alternative.

FA12-3

> At the request of the Rock Springs and Rawlins BLM Districts, the FERC analyzed three route variations to the South Pass segment of the proposed Altamont Pipeline route. These variations (Jeffrey City, Alkali Butte, and Northern Utilities) were identified and assessed in the DEIS. While sentiment exists favoring the Jeffrey City variation for reasons including that it avoids South Pass and parallels existing rights-of-way to a greater degree, it is the official determination of the BLM that the proposed Altamont route with realignments proposed by the FERC staff represents the BLM preferred alternative. The proposed route, as modified, is not inconsistent with the current planning decisions of the affected BLM resource areas. Inclusion of FERC's proposed mitigation measures in combination with any BLM right-of-way conditions and compliance with all applicable local, state, and federal laws and regulations will result in an environmentally acceptable project. Where performance standards, mitigation measures, and right-of-way grant conditions are properly employed and enforced, the proposed route would not result in environmental impacts exceeding those that would occur under any of the route variations.

The BLM appreciates the opportunity to cooperate in this FERC-led EIS effort. While we recognise the difficulty in dealing with policies, mandates, and planning decisions relating to a land management agency such as ours, your willingness to consider BLM proposed alternatives and to utilize BLM data and plans in developing this EIS go a long way toward making the EIS a document this agency can utilize in its own decision process. Altamont and its contractors have been very considerate and obliging throughout the EIS effort in providing information and clarification to the many environmental concerns this agency has surfaced. It is our hope that for the sake of consistency and continuity that these personnel will continue to be available through development of the BLM Plan of Development. The many pending issues will require both the experience and sensitivities gained through the EIS effort

FA12-3 Comment accepted. See new section in Chapter 6.

occurring to date. Similarly, we expect our respective agency cooperative roles to continue to proceed beyond any FERC decision to permit the full breadth of cooperation through any construction stage.

In conclusion, for the record, I would like to reiterate that the attached comments represent the official BLM concerns with regard to the Altamont Portion of the DEIS. Previously related BLM comments or those dealing with early internal reviews can either be assumed to be resolved or of a nature that BLM will deal with in its review and approval of the POO and any right-of-way grant.

Thank you for the opportunity to cooperate in this endeavor.

Sincerely,

Darrell Barnes

Darrell Barnes
District Manager

cc: Alan Edwards
State of Wyoming--Governor's Office
Herschler Bldg.-2nd East,
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Larry Sauter, Fed. Energy Reg. Comm.
Environmental Engineer, Altamont Project
825 No. Capitol St., NE, Room 7312
Washington, DC 20426

Jack Mills, BLM-California State Office
BLM WSO-931

REVIEW CONSOLIDATION FORM

ALTAMONT PIPELINE
PGT/PG&E & ALTAMONT DRAFT EIS

MARCH 8, 1991

	PAGE / PARA / LINE /			COMMENTS Page 1 of 9
FA12-4	GENERAL COMMENTS-CH. 4			A large amount of cost data and requirements are deferred pending further studies, specifically for pages 4A-5, 4A-6, 4C-4, 4E-60, 4E-62, 4G-9, 4L-9, 4J-1 thru 3, and 5-5 of the C&R Plan for MP 511 to MP 540.8. It is not certain if these will have a bearing on route selection or impact significance. Please so indicate.
FA12-5	S-21	Table 2-3	6	The miles of significant paleontological formations (241) does not agree with Table S-4's miles of paleontological formations (117) on page S-28. If 117 miles for the proposed route is correct from where the Variations begin, then 117 miles for all of the Variations is probably not correct.
FA12-6	S-29 6-23 6-26	Table 6-3		The Jeffrey City variation would parallel existing right-of-way for approximately 227 miles (98%).
FA12-7	2-7	2	3&4	Please define "screening."
FA12-8	2-11	5	1&2	"...where necessary and appropriate." This should specifically entail steep slopes, riparian zones, and sandy soils.
FA12-9	2-46	TABLE 2-10		Add cost estimate columns for South Pass Variations.
FA12-10	2-46	TABLE 2-10		As discussed and agreed at the BLM/FERC meeting on February 26, add the same cost estimate summary to this table for the alternatives and add a reclamation cost item to the column headed "Item Number."
FA12-11	2-52	2	--	ADD A NEW SUBSECTION: 2.4.4 *Proposed Route Segment Variations* Suggested wording for this subsection: Public comment received on the DEIS identified two potential segment variations to the proposed route. One possible variation would have the pipeline follow the abandoned railroad which traverses the immediate vicinity of South Pass and extends and immediately south of the proposed route (MP 525 to 550). This alternative is described below as the Abandoned Railroad Variation. The second variation identified in the public comments is a variation to the segment of the proposed route crossing Opal Bench and the Hams Fork River (MP 605 to 620). This alternative is described below as the Opal Bench/Hams Fork River Variation. Because both the Abandoned Railroad Variation and the Opal Bench/Hams Fork River Variation are new variations which may require indepth analysis to determine their feasibility and viability, and because this cannot be accomplished timely for inclusion in the final EIS, no further discussions of these alternative variations appear in this document. The reason for this decision is that we do not believe that

FA12-4	The majority of the activities addressed on these pages can be characterized as studies and/or mitigation which are routinely applied to pipeline construction, or has an insignificant cost impact. Items in this category include studies and mitigation related to special-status vegetation and wildlife, local infrastructure upgrading to accommodate construction equipment and vehicles, visual impact at aboveground facilities, and construction at stream crossings having potentially contaminated sediments. To the extent that these issues are foreseen, they typically affect route selection prior to application submittal. Potential impacts associated with these areas of concern would be avoided or mitigated by implementation of the appropriate staff recommendations. Although the results of these studies could directly affect routing, this effect would be extremely localized along the proposed route. While the staff's recommendations enlarge the scope of Altamont's proposed geotechnical studies somewhat, cost implication's would be limited. As stated on DEIS Page 4A-6, geology related hazards would be reduced to less-than-significant levels by implementation of our recommendations. Discussions with Altamont indicate that the special construction spread recently proposed for the South Pass area would have an insignificant impact on project cost. (See Page 5-3 of the Construction and Rehabilitation Plan MP 511.0 to MP 540.8, reprinted as new Appendix B-5.) The effect of this measure would be to reduce impact significance.
FA12-5	Table S-3 represents paleontologic formations crossed for the entire route, while Table S-4 is limited to the proposed route and variations (MPs 428-620). Based on information presently available, a similar amount of significant paleontologic formations would be crossed by all of the routes under consideration.
FA12-6	Comment accepted. See changes in the Executive Summary and in Chapter 3 and 6.
FA12-7	This sentence references one technique for obtaining graded material for bedding or backfilling around the pipe in rocky areas. A pipeline padding machine passes subsoil through a series of screens and deposits graded material around the pipe.
FA12-8	Thank you for your comment. We agree with your examples, but wish to point out that seeding and mulching would be inappropriate in annually-cultivated agricultural lands.
FA12-9	Comment noted. This information is presented in a new Table 2-11, which compares costs associated with variations against those of the proposed route.
FA12-10	As the FERC representative stated at the interagency meeting, reclamation is generally included as part of normal pipeline costs (Item Number 2 in Table 2-10) and not broken-out as a separate cost item. However, Altamont has estimated that the costs to implement the incremental mitigation measures identified in its Construction and Rehabilitation Plan MP 511.0 to MP 540.8 to be $890,000 (1990 dollars). Altamont anticipates that this cost would be covered by its contingency funds (Item Number 9 in Table 2-10), which is an allowance for omissions, changes, and overall estimating inaccuracies on the project. No further information is presently available.
FA12-11	Staff agrees that any information derived from further analysis would not have a bearing on the proposed route which BLM prefers. Accordingly, these two alternatives have been placed in Section 2.7.3 of the FEIS as alternatives considered but eliminated from further consideration. It should also then be emphasized that if the BLM's "further analysis" results in a significant deviation from the route addressed in the FEIS, then BLM will be responsible for preparing appropriate NEPA documentation to support the deviation. It would also be necessary for Altamont to file an amended application with the FERC addressing the deviation.

FA12-11 (cont.)

the information derived from such an analysis would have any direct bearing on the ultimate selection of the preferred route for the pipeline.

Nevertheless, if the Altamont proposed route is selected, chapter 6 ("Conclusions and Recommendations") we propose to specify the requirement for further analysis of these variations (between MP 248 and 620) before right-of-way issuance will be authorized by BLM.

Abandoned Railroad Variation. The Abandoned Railroad Variation is approximately 192.7 miles long compared to the 192 miles for the proposed route it would replace. This new alignment would avoid any new crossings of the Oregon-Mormon Trail, but would not avoid crossing the South Pass National Historic Landmark (NHL). Approximately 3.75 miles of the abandoned railroad traverses through the middle of the NHL. This route would provide BLM some opportunity to restore and reclaim a substantial segment of an existing disturbance, including that part of the railroad traversing through the NHL.

The abandoned railroad bed which runs from Rock Springs, Wyoming to the abandoned iron ore mine in the South Pass area north of Wyoming Highway 28. The rails and ballast have been removed. The proposed route of the Altamont pipeline crosses the abandoned railroad at approximately MP 525, immediately east of the Sweetwater River. This variation would have the pipeline follow the railroad for 25 miles to MP 550 where the proposed route would be continued.

The Abandoned Railroad Variation would not require any change in the locations proposed for Compressor Stations Number 5 and 6. Altamont's proposed horsepower requirements would also be unaffected.

Opal Bench/Hams Fork River Variation. This variation would increase the total length of the proposed pipeline route approximately 2.5 miles. Beginning at MP 596, immediately after crossing Wyoming Highway 372, the pipeline realignment would begin. The line would be directed around the west end of Opal Bench, across Wyoming Highway 240, to the existing pipeline corridor which it would parallel south across the Hams Fork River to the Opal Meter Station.

The new variation would avoid a new crossing of the Hams Fork River, placing it instead about 2.5 miles west in an existing corridor crossing. This variation would also avoid a crossing of Opal Bench, an area of extreme erosion hazard, poor soils not conducive to successful revegetation.

The reroute would follow an existing corridor for 10 miles and cross the Hams Fork River where other pipelines have crossed. Some of the additional costs associated with increased length would be offset by savings in reduced construction time due to relatively flat topography and lower potential for cultural site clearances/excavations.

FA12-12 2-52
2-58
2-61
2-62

CHANGE subsequent chapter 2 section headings numerically to accommodate the above additions.

FA12-13 2-61 3 -- BLM will require prior approval of noxious weed (all vegetation) control on BLM lands.

FA12-12 Renumbering is now not necessary

FA12-13 Comment accepted. See change to Chapter 2. Prior approval by the federal land managing agency is also recognized in DEIS Recommendation 50.

	PAGE	PARA	LINE	COMMENTS
FA12-14	3B-5 1,2,&3			Rehabilitation rating potentials (good, fair, and poor) should be defined.
FA12-15	3B-5	5	4&5	The Fremont County soil survey has been completed and is currently awaiting publication.
FA12-16	3D-13	6		The EIS should address the Recreational Experience Opportunities in the South Pass area, which would be affected by the pipeline. The Continental Divide National Scenic Trail would be crossed between MP 515 and 529. The statement that "98% of the route in Fremont County is rangeland" is an insufficient description of the uses to which the land is put. The entire county is rich in diverse land values and uses.
FA12-17	3D-13	4	3	The sentence concerning the Indian Reservation Lands in Washakie County was deleted as suggested. This information was not added to the Hot Springs County paragraph.
FA12-18	3D-13	8	5	Between MP 508 and 540, the proposed route passes near or crosses the Oregon National Historic Trail, the Mormon Pioneer National Historic Trail, the Pony Express Route, the Lander Cutoff of the Oregon Trail, and the Continental Divide National Scenic Trail. The pipeline would also cross the Sweetwater River, which was included in the National Park Service Nationwide Rivers Inventory, complete in 1982, and the Outstanding Rivers lists, completed in 1988 by the American Rivers, Inc. These lists include rivers considered to have potential for designation under the National Wild and Scenic Rivers Act In addition, the South Pass area is a focus of recreational use by hunters, fishermen, and back country use by bikers, hikers, and off-highway motor vehicle users. The area through which the pipeline would pass provides the physical setting for those recreational activities and opportunities. The physical setting has a major influence on the type experience recreationists have while participating in a given activity, experiencing the national historic and National Scenic Trails in a mostly natural setting. Their expectations are currently being met. Much of the area through which the proposed pipeline passes is considered semiprimitive motorized, in term of the Recreation Experience Opportunity available in the area. This includes all areas except those crossed by major roads or the abandoned U.S. Steel Railroad. (See Lander RMP and BLM Manual Handbook H-8310-1.) This classification results from a physical setting that is mostly devoid of modern human-made features. BLM management actions are geared toward maintaining the existing natural setting.
FA12-19	3D-13	8	7	Change "536.5" to 521.2. Add after the end of sentence, "The second crossing of the Oregon-Mormon Trail would occur near MP 536.5."
FA12-20	3D-14	1	9	Also impacted would be the Bridger Trail and the Casper-Lander Road in the northern portion of the route. Homesteads can be expected, especially around the South Pass area, the Twin Creek area, the Muskrat Creek area, and the Bridger Creek area.
FA12-21	3D-14	3	3	Two cutoffs of the Oregon Trail would be crossed at MP 582.9 (Slate Creek Cutoff) and at MP 591.9 (Kinney Cutoff).
FA12-22	3E-30 and 4E-55		3	Ferruginous Hawk - Nesting Habitat - known to commonly abandon nests especially before hatching. Abandonment caused by human disturbances--Nesting March & April/Hatching May/Fledge July.

FA12-14	Comment accepted. See material added as new Appendix B-4.
FA12-15	Comment accepted. See change to Chapter 3B.
FA12-16	Comment noted. (a) See revised Chapter 3D for a discussion of the Recreational Opportunity Spectrum. (b) Because the actual route of the Continental Divide Trail has not been determined at this time, any attempt at site-specific analysis would be speculative. However, we believe that with implementation of Altamont's Construction and Rehabilitation Plan MP 511.0 to MP 540.8 and other mitigation discussed and/or recommended in the FEIS, the right-of-way would have a low visual impact on the future trail. (c) See the introduction to Chapter 3D for a description of the land use categories. Rangeland is the category that best describes the existing condition of the area.
FA12-17	The referenced sentence states that "the route passes just outside the southeast corner of the Wind River Indian Reservation". It was erroneously included in the paragraph which addressed Washakie County in an early draft of the EIS. This feature occurs in Fremont County.
FA12-18	Comment accepted. See revised Chapter 3D.
FA12-19	Comment accepted. See revised Chapter 3D.
FA12-20	See Chapter 3M "Cultural Resources".
FA12-21	See Chapter 3M "Cultural Resources".
FA12-22	Thank you for this information.

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	PAGE	PARA	LINE	COMMENTS		
FA12-23	3E-32	8		Riparian areas associated with Bridger, Poison, Tweed, Twin, Stambaugh, Little Beaver, Rocky, Willow, Fish, and Pine creeks and the Sweetwater River are not listed or figured into the riparian/wetland acres crossed. These areas have associated riparian zones that are greater than 200 feet wide that will be impacted.	FA12-23	The cited paragraph was not intended to be all-inclusive, and referred the reader to Appendix E. A previous reference in Chapter 3E identified that wetland and riparian vegetation information was presented in Appendix E and summarized in Table 3E-2. With the exception of Little Beaver and Tweed Creek, all of the crossings referenced are listed in Appendix E. Riparian areas associated with Bridger and Twin Creek, and the Sweetwater River are less than 200 feet wide (based on field observations and aerial photography review), and therefore not referenced in the cited paragraph. While our aerial photographs do not indicate significant riparian vegetation at Little Beaver Creek, we will be happy to revise Appendix E if the BLM can confirm the linear footage of riparian vegetation which would be disturbed at this location. Please note that Altamont's November 1990 realignments avoided Tweed Creek.
FA12-24	3E-34	8		Note: Pronghorn crucial winter and winter/yearlong habitat is crossed between MPs 352 and 372.5. White-tailed deer and mule deer winter/yearlong occur at the Graybull River riparian crossing area.	FA12-24	Comment accepted. See revised Chapter 3E.
FA12-25	3E-35 Table 3E-7			Need to add: white-tailed and mule deer winter/yearlong - MP 351-352; pronghorn winter/yearlong - MP 352-372.5, crucial winter - MP 365-370. Sage grouse winter/yearlong habitat occurs in the isolated sagebrush islands between MP 352-372.5 as well.	FA12-25	Comment accepted. See revised Chapter 3E.
FA12-26	3F-10 thru 12			Why is the terminology "stream crossing" used for the proposed route and "sensitive fisheries" for the variations?	FA12-26	We have clarified this in our revision of Chapter 3F.
FA12-27	3G-08	1	5	INSERT a space between the words resource and development. SHOULD READ "resource development"	FA12-27	Comment accepted. See change to Chapter 3G.
FA12-28	3I-03	6	4-5	"Chicago Burlington and Quincy Railroad line" SHOULD BE Burlington Northern Railroad line	FA12-28	Comment accepted. See change to Chapter 3I.
FA12-29	3M-13	1	9	ADD "Slate Creek" after the word "Fork."	FA12-29	Comment accepted. See change to Chapter 3M.
FA12-30	3M-13	6	2-3	ADD However, the Northern Arapahoe have identified sensitive areas in the Nowood-Lost Cabin region where the project crosses, and more areas are likely to be identified along the route as well.	FA12-30	Comment accepted. See changes in Chapters 3M and 4M.
FA12-31	3M-13	6	2	Nontribal lands in Wyoming are considered to be important by Native Americans in Wyoming. Bridger Mountains in particular for this project, others may be identified.	FA12-31	Comment accepted. See changes in Chapters 3M and 4M.
FA12-32	3M-14	4	3	Please add new sentence: The Willwood Formation of Wasatchian-age encountered in Big Horn and Washakie counties is known to contain significant mammalian assemblages. In Hot Springs County, fossil mammalian remains are also known from the Aycross Formation.	FA12-32	Comment accepted. See change to Chapter 3M.
FA12-33	4C-3	1	--	Most creeks on South Pass are entrenched to resistant material. Lateral channel migration in the floodplain is the common erosional problem here.	FA12-33	Thank you for this information.
FA12-34	4C-3	4	7	ADD the following wording: ...for such purposes, with such areas to be located at least 100 feet (on Federal lands 660 feet) away from all water bodies;...	FA12-34	Chapter 4C now acknowledges that federal land managing agencies may require standards which differ from our procedures.
FA12-35	4C-11	3	2	ADD the following wording: ...50 feet from streambanks where topographic conditions permit. On Federal lands, staging areas will be located 100 feet from streambanks whenever possible. Potential contamination of...	FA12-35	See previous response.
FA12-36	4C-11	3	8	ADD the following wording: ...crossing locations. On Federal lands, the servicing (refueling, oil change, and so forth) of construction vehicles and the storage of hazardous materials will be restricted to 500 feet from riparian/wetland areas and 660 feet from surface waters. In situations where this requirement is technically infeasible, FERC and Federal recommendations allow the applicants to request an exemption on a site-specific basis...	FA12-36	See response to Comment FA12-34.

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	PAGE /	PARA /	LINE /	COMMENTS		
FA12-37	4C-12	6	2	ADD the following wording: ...100 feet wide be submitted to FERC for review and approval prior to construction. On Federal lands, site-specific construction plans for all river and riparian/wetland crossings, irrespective of width, will be required by the surface managing agency for review and approval prior to construction. These plans should be developed...	FA12-37	See response to Comment FA12-34.
FA12-38	4C-12	7	--	ADD the following wording: ...Bank Stabilization/Revegetation. Streambank ...riparian strip along the stream embankment. On Federal land, just as in the upland areas, the riparian/wetland areas will be seeded or have vegetation transplanted on them and temporarily fenced after seeding (if necessary to keep off concentrations of livestock).	FA12-38	See response to Comment 34 above.
FA12-39	4C-15	4	1	The Missouri River should require specific measures comparable to the Milk River.	FA12-39	Please see our revision of Chapter 4C.
FA12-40	4D-9	3-5	All	This is a more detailed assessment of impacts and the potential for impact mitigation that we feel exists in the South Pass area between MP 510 and MP 530. First, the proposed pipeline passes through an area that presently has few human-made features. Those that are there are mostly two-track roads and fences, features that blend in fairly well with the natural landscape. The area is one of very high public interest and contains a number of National Scenic and Historic Trails. It is sparsely vegetated and in many places has only a thin veneer of soil over bedrock. It is therefore an area considered to have very high visual sensitivity. It does not have very high potential for revegetation, particularly for the reestablishment of natural vegetative patterns in a relatively short timeframe. This statement is supported by the experience with the AT&T communcation line, located south of the Sweetwater River, an area having similar environmental conditions. That line was built about 20 years ago and is clearly visible today both in the field and on aerial photographs supplied to BLM by Altamont.. Construction of the pipeline will creat lines and color that contrast with the natural line and color in the landscape. Most of the natural lines in the landscape are the line defining the gently rolling hills. Therefore, almost all lines in the landscape are gently curved, intersecting, horizontal lines. Color is predominately a greenish, grayish beige. Color changes with seasons but is reasonably closely approximated by BLM's standard environmental color known as Carlsbad Canyon. Field examinations were limited this winter but it is apparent that the color of the disturbed right-of-way will be lighter than the natural vegetation, especially between Rock Creek and the drainage divide between Willow Creek and Slaughterhouse Gulch. The line created by pipeline construction will cross natural lines of the landscape at right angles and appear vertical rather than horizontal. Impacts to line and color, in combination, will create a noticeable scar of long-term duration and would be readily noticeable from all main travel routes into the area.	FA12-40	We assume this comment was intended for Chapter 4L. See revised Chapter 4L.
FA12-41	4D-11	3	5-7	ADD the following rewording: ...and Kemmerer Resource Management Plan. No known conflicts with the plans and policies set forth in these documents would result for the majority of the proposed pipeline route. The proposed route through the South Pass area conflicts somewhat with the Lander Resource Management Plan and the Big Sandy Management Framework Plan. BLM policy and these plans prescribe management of right-of-way use of the public lands to corridors whenever practical and feasible.	FA12-41	Comment noted. See revised Chapter 4D.

	PAGE	PARA	LINE	COMMENTS		
FA12-41 (cont.)	4D-11 (continued)	3	5-7	Placement of rights-of-way immediately adjacent and parallel to existing lines where practical, and away from areas identified as having high scenic and cultural values is encouraged.		
FA12-42	4D-11	5	All	Included in the Lander RMP is a description of the Recreation Experience Opportunities available in the Greater South Pass Area. This pipelive could affect the type experience recreationist have. The present experience is largely semiprimitive motorized. The Continental Divide National Scenic Trail would be crossed by the pipeline as indicated above, and would lessen the degree of naturalness seen by visitors.	FA12-42	Comment noted. See response to Comment FA12-16 above and revised Chapter 4D.
FA12-43	4D-11	5		Environmental Consequences - Land Use. The EIS states that "...the crossing of the...through South Pass could cause inconvenience to visitors..." It identified: "Temporary disturbance of aesthetic qualities." and states that "no long-term interruption of recreational use would occur." This is a highly simplified analysis of recreation in back country or wildland settings. It is quite true that recreational use of the area would continue during and after construction of the pipelive.	FA12-43	Comment noted. We have addressed this issue in more detail in FEIS Chapter 4D-9.
FA12-44	4E-1	1	8	Removal of vegetation along the ROW will increase vehicle access along the ROW.	FA12-44	We disagree. Removal of vegetation along a right-of-way may result in an increase in vehicle use along the right-of-way only where existing vegetation precludes vehicle access (i.e., forested areas). The comment is academic along virtually all of Altamont's proposed route.
FA12-45	4E-6	2	3	ADD the following wording: ...Non-forested wetlands should return to a preconstruction stabilized condition in two or three growing seasons. If willows were present, 10 to 20 years would be needed to attain preconstruction vegetative conditions. Construction through agricultural land...	FA12-45	We doubt that it would take willows 10 to 20 years to reestablish.
FA12-46	4E-9	2		The stream and wetland construction and mitigation procedures are in Appendix C-3, not E-3	FA12-46	Comment accepted. See change to Chapter 4E.
FA12-47	4E-11	1	6	ADD the following wording: ...woody vegetation. On Federal lands, all wetland woody vegetation will be replanted, wetland grasses and forbs reseeded and temporarily fenced after seeding (if necessary to keep off concentrations of livestock). Because maintaining the right-of-way free of woody...	FA12-47	See response to Comment FA12-34 above.
FA12-48	4E-11	2		Of particular concern is invasion of tamarisk on the BLM Greybull River crossing. This species is especially aggressive and creates a long-term impact if not controlled.	FA12-48	Thank you for this information.
FA12-49	4E-11	4		The clearing of riparian vegetation will be a long-term impact of habitat on moose winter range.	FA12-49	The DEIS acknowledges this fact on Page 4E-62.
FA12-50	4E-51	5		White-tailed prairie dog is unique to the southern portion of Carbon County in Montana. Colony destruction should be avoided.	FA12-50	Thank you for this information.
FA12-51	4E-51	5	3	Will searches for black-footed ferrets be conducted in the three black-tailed prairie dog and one white-tailed prairie dog colonies prior to pipelive construction?	FA12-51	Yes. Please see revisions to Chapter 4E.
FA12-52	4E-51	6		Pronghorn fawning and wintering areas are within 1 miles of the pipelive route T1N, R21E	FA12-52	Thank you for this information.
FA12-53	4E-61	4	3-4	SHOULD READ: Bald eagles do winter along the Greybull, Bighorn...	FA12-53	Comment accepted. See change to Chapter 4E.
FA12-54	4E-61	4	5	INSERT "on" between the words "impacts migrating..." SHOULD READ impacts on migrating..."	FA12-54	Comment accepted. See change to Chapter 4E.

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	PAGE	PARA	LINE	COMMENTS		
FA12-55	4E-64	3	4	Mountain plover densities are much lower than 45/section between mile post 353-370. They are very uncommon but do nest here. Also, Knowles n.d. citation is not referenced in the "Literature Cited." Are the 40 acres noted as habitat inclusive of areas between MP 353-370.	FA12-55	Comment accepted. See changes to Chapter 4E. "40 acres" refers to the entire route in Wyoming.
FA12-56	4F-3	2	11	ADD the following wording: ...After construction, all riparian, wetland, and stream shoreline areas would be mulched and reseeded with appropriate vegetation. Revegetation with native herbaceous and woody plant species is recommended for long-term soil stabilization. On Federal lands, riparian, wetland, and stream crossing areas may be temporarily fenced after seeding if necessary to keep off concentrations of livestock) to ensure revegetation success.	FA12-56	See response to Comment FA12-34 above.
FA12-57	4J-1	GENERAL		The potential creation of a new corridor should be noted. Looping is a common practice and BLM encourages proponents to parallel existing rights-of-way.	FA12-57	We are unaware of an planning initiatives to designate corridors in the project area. However, this issue is addressed in Chapter 5 of the FEIS.
FA12-58	4J-3	3		There are few roads that are available for construction access along the proposed route and alternatives. The proposed route and alternatives intersect highways, county roads, or other roads that are suitable for construction use only at a few places resulting in 10- to 20-mile-long segments without access and some of these segments cross difficult terrain. One exception to this lack of available access is the Jeffrey City variation which parallels county roads for a minimum of 85 miles in the Lander Resource Area.	FA12-58	We disagree. Review of U.S. Geological Survey topographic maps, aerial photography, and data filed by Altamont all support the occurrence of suitable access roads along the proposed route at much smaller distances than the referenced 10- to 20-mile intervals.
FA12-59	4M-7	2		ADD a new paragraph after 12. The Proposed Action will cause impacts on three major, cutoffs of the Oregon Trail. The Lander Cutoff, the Slate Creek Cutoff, and the Kinney Cutoff will all be affected by the Proposed Route.	FA12-59	Comment accepted. See revised Chapter 4M.
FA12-60	4M-7	2	9,14	The existing dirt road is known as the "Oregon Buttes Road" rather than the "Lander Road."	FA12-60	Comment accepted. See changes to Chapter 4M.
FA12-61	4M-2	1	2	Please change to read: "FERC staff and appropriate agencies staff, in consultation" The BLM must be involved in all consultation regarding affects to all historic properties on lands administered by the BLM.	FA12-61	Comment accepted. See change to Chapter 4M.
FA12-62	4M-6	2	4	The buried cable is copper not fiber optic.	FA12-62	Comment accepted. See change to Chapter 4M and 5.
FA12-63	4M-8	4	5	Please add: The BLM believes that these impacts to sites on federal lands can best be addressed through a Memorandum of Agreement between the SHPO's, the appropriate federal agencies, the FERC, and the ACHP.	FA12-63	Comment noted. We do not anticipate pursuing the development of any project-specific agreement documents at this time.
FA12-64	5-1	5		Abandonment and future replacement of sections of the pipeline should be addressed under the Cumulative Impacts.	FA12-64	Abandonment of either pipeline is addressed in Chapter 2. If conditions warranted the replacement of sections of the pipeline at some future date, measures similar to those used during construction would be employed. Neither abandonment nor sectional replacement is presently proposed.
FA12-65	5-2	3	13,14	After the last sentence ADD: The Lander RMP states that "Major utility and transportation systses will be located to make use of existing corridors whenever possible, to provide for cost-efficient routes and to provide for protection of other resource values such as scenery and wildlife." (Record of Decision, page 6.) Cumulative impacts will occur when the next utility/transportation project is proposed to traverse the area. BLM will likely require the proponent to follow the established corridor created by Altamont pipeline, in order to reduce further impacts on the South Pass area.	FA12-65	See material added to Chapter 5. We disagree that use of Altamont's proposed route constitutes the establishment of a "utility corridor". Utility corridors across federally-administered lands are designated as a result of a formal planning process which is adopted into a resource management plan or plan amendment.
FA12-66	5-10 1-16	last 2		Recreation is only mentioned as a land use. That may be appropriate for much of the proposed and/or alternative routes; but Recreation is an issue and/or concern for the public in some areas such as the South Pass region.	FA12-66	Recreational resources are a specific aspect of our land use analysis. In this regard, we developed a criterion for determining significance of adverse impacts on recreation and addressed recreational impact in Chapter 4D.

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	PAGE	PARA	LINE	COMMENTS		
FA12-67	6-24 Table 6-3			What is the source of information for acres of wetland/riparian habitat crossed?	FA12-67	Aerial photography obtained in September 1989 at a scale of 1:12,000.
FA12-68	6-25 Table 6-3 Cont. 2-49 Fig. 2-10 2-50 thru 2-51			The table, figures, and pages referenced show that the Jeffrey City, Alkali Butte, and Northern Utilities variations would require an additional compressor site for each route. The rationale and supporting data needs to be added as to why an extra Compressor is needed on those various routes.	FA12-68	Comment accepted. See language added to Section 2.4.3 in Chapter 2.
FA12-69	6-30	2	4	ADD the following wording to measure 5: ...develop, in conjunction with the appropriate state and federal (surface managing agency) agencies, site-specific revegetation plans...	FA12-69	Comment accepted. See change to DEIS Recommendation 5.
FA12-70	6-38	3	8	ADD the following wording to the end of measure 48: ...Altamont shall continue to reseed disturbed areas until a successful stand is established. All riparian, wetland, and stream crossing seeding and revegetation areas may require fencing to ensure successful stabilization and revegetation.	FA12-70	Comment noted. The requirement to fence disturbed riparian, wetland, and stream crossing areas would be the responsibility of the landowner of land administering agency.
FA12-71	6-41	--	--	ADD the following measure as number 68: 68. In the event the Altamont proposed route is selected (through South Pass), BLM will require further analysis of the Abandoned Railroad and Opal Bench/Hams Fork River Variations, identified and described in chapter 2 at 2.4.4, will be required. This shall include a comparative analysis of the proposed route with the identified variations associated with the proposed route (between MP 428 and 620) before right-of-way issuance will be authorized by BLM.	FA12-71	This recommendation appears to be in direct conflict with the BLM's conclusions in Chapter 6. (See BLM Comment 3 above.) [Subsequent discussions with the BLM indicate that the mileposts referenced in this comment are wrong. The parenthetical should read "(between MPs 525 and 550, and between MPs 596 and 620)".] BLM's intent to require further analysis to determine feasibility of the two segment variations is noted in sections in Chapters 2 (Section 2.4.4) and (BLM CONCLUSIONS...).
FA12-72	6-41	5	5	Please change to read: "FERC staff and appropriate agencies staff, in consultation..." The BLM must be involved in all consultation regarding the evaluation of cultural resources located on lands administered by BLM for inclusion on the National Register of Historic Places.	FA12-72	Comment accepted. See change to DEIS Recommendation 68.
FA12-73	6-42	1	4	Please change to: "FERC staff and appropriate agencies staff..."	FA12-73	Comment accepted. See change to DEIS Recommendation 68.
FA12-74	6-42	4	10	Please change to read: "appropriate SHPOS and agencies marked..." The BLM must be provided with information regarding Native American concerns that relate to lands administered by the BLM.	FA12-74	Comment accepted. See change to DEIS Recommendation 68.
FA12-75	6-43	1	3	Please change to "SHPOS, appropriate agency staff have..."	FA12-75	Comment accepted. See change to DEIS Recommendation 68.
				APPENDICES		
FA12-76	B-3-3 Table B-3-1			Seed mixes should vary according to soils and precipitation and by jurisdictional prescription.	FA12-76	DEIS Recommendations 5 and 18 acknowledge the role that appropriate federal and state agencies would play in prescribing seed mixes. See also response to Comment FA12-73 of the State of Montana.
FA12-77	B-3-5			These clayey soils often have a high SAR and will require species adapted to salts. Close observation of vegetation types along the route should provide more appropriate guidance for seeding.	FA12-77	Thank you for this information. See response to Comment FA12-76 above.
FA12-78	B-3-7 Table 12			Elymus triticoides common name is Beardless Wildrye not Basin Wildrye (see Saline Soils section, same page). Preferred variety should be Shoshoni.	FA12-78	Comment accepted. See changes to Appendix B-3.

	PAGE /	PARA /	LINE /	COMMENTS		
FA12-79	C-3-1	I.A.1		ADD the following wording: 1. Locate at least 50 feet (100 feet on Federal lands) away from streambank... 3. Do not store hazardous...within 100 feet (500 feet on Federal lands) of streambanks or within any municipal watershed area. In areas of surface water (reservoir, lake, spring, and so forth) on Federal lands a 660-foot restriction will apply.	FA12-79	See response to Comment FA12-47 above.
FA12-80	C-3-3	I.F.4		ADD the following wording to F.4: 4. Allow 10-foot-wide...across the entire ROW. On Federal lands, just as in the upland areas, the riparian/wetland areas will be seeded or have vegetation transplanted on them and temporarily fenced after seeding (if necessary to keep off concentrations of livestock) to ensure successful revegetation.	FA12-80	See response to Comment FA12-56 above.
FA12-81	C-3	4	--	Make the following correction to the Federally Delineated Wetland Crossings: A.1. Locate at least 100 feet away from wetland edge,... A.3. Do not store hazardous materials,...within 500 feet of wetland boundary or 660 feet of surface waters (reservoir, lake, spring, and so forth).	FA12-81	See response to Comment FA12-36 above.

[U.S. Department of the Interior, Bureau of Reclamation, Denver, Colorado]

ORIGINAL

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SECRETARY

D-5510

MAR 07 1991

CP90-1375

Ms. Lois Cashall
Secretary, Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington DC 20426

Subject: Review of Draft Environmental Impact Statement for Pacific Gas Transmission Company and Altamont Gas Transmission Company's Natural Gas Pipeline Projects; Idaho, Washington, Oregon, California, Montana and Wyoming (ER 91/6D) (Due Date February 21, 1991) (Environmental Review)

Dear Ms. Cashall:

FA13-1 Due to a misunderstanding within our agency, comments were sent to you in error from the Bureau of Reclamation's Pacific Northwest and Great Plains Regional offices, regarding ER 91/6D.

We are withdrawing these comments. Our comments will be incorporated in a letter from the Director, Office of Environmental Affairs, Department of the Interior.

Sincerely,

Robert K. Lanky

Robert K. Lanky, Manager
Planning Services Staff

cc: Director, Office of Environmental Affairs
Attention: Ms. Libby Stone
Main Interior Building
1849 C Street, N.W.
Washington, D.C. 20240

FA13-1 Thank you for your comment. No response required.

FA-74

[United States Environmental Protection Agency, San Francisco, California]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

13 MAR 1991

91 MAR 13 PM 2:18

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C.   20426

RE: Docket Nos. GP89-460-DD1 and GP90-1375-DDD)

Dear Ms. Cashell:

The Environmental Protection Agency (EPA) has reviewed the draft environmental impact statement (DEIS) for the PGT/PG&E and **Altamont Natural Gas Pipeline Projects** pursuant to the National Environmental Policy Act (NEPA) and section 309 of the Clean Air Act. Detailed comments are enclosed reflecting the concerns of EPA Regions VIII, IX, and X.

The PGT/PG&E pipeline would include the construction of 845 miles of new pipeline and the expansion of numerous compressor stations. This $1.18 billion dollar project would connect to the Alberta Natural Gas Company, Ltd. (ANG) pipeline at Kingsgate, British Columbia and deliver gas to PGT/PG&E from fields located in British Columbia and Alberta. Gas would be delivered to PGT facilities in Idaho, Washington, and Oregon, and PG&E facilities as far south as Fresno County, California. The DEIS states that the environmental impacts of the ANG project are beyond the scope of analysis.

The Altamont pipeline would include the construction of 620 miles of pipeline crossing the U.S./Canada border near Wild Horse, Montana and running to Opal, Wyoming. The Altamont pipeline connects to the Kern River/Mojave pipeline at Opal that delivers gas to Southern California. Although a majority of Altamont's capacity is expected to use Canadian gas from the Albertan NOVA Corp., the ultimate origin of the gas would be determined later. The cost of this pipeline is an estimated $573.4 million dollars. At least four alternative projects meet the FERC screening criteria for supplying all or most of the natural gas needed for California.

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Project impacts include a variety of significant affects attributable to the large geographic scope of the proposed pipeline project. For example, the proposed pipeline alignments would cross: 302 acres of wetlands; 463 perennial and intermittent streams; 26 major rivers; 5 waterbodies with contaminated sediments; 38 recreation fisheries; 31 fishery spawning areas; and 18 anadromous fisheries. In addition, it is projected to potentially affect 31 threatened and endangered species and to disturb large acreages of forested land, sensitive soil areas, farmland, and wildlife habitat. Compressor stations and venting could contribute to air quality degradation. Several hundred significant cultural resource sites would also be crossed.

FA14-1 EPA has rated this document EO-2 (Environmental Objections, Insufficient Information) because of the aforementioned significant impacts and the lack of specificity in the overall impact analysis and proposed mitigation measures. EPA has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative.

FA14-2 In the DEIS the FERC staff identifies the need to develop several pieces of information, including alignment alternatives, site-specific impact analyses, and mitigation programs which should have been made available in the DEIS for public review and comment. The absence of definitive information in the DEIS makes it difficult to assess the full impact of and potential alternatives to the proposed project.

FA14-3 The DEIS indicates that significant impacts, such as those attributable to PGT's proposed route through the Moyie River valley, would occur to sensitive wildlife species, wetland areas, visual resources, cultural resources, and recreational users. The DEIS further indicates that the proposed route would increase the likelihood of significant cumulative impacts to water quality and coldwater fisheries. Other fishery, wetland, and water quality impacts could occur. It does not appear that the proposed alignment would comply with the Clean Water Act section 404(b)(1) Guidelines for the disposal of dredged or fill material. EPA recommends the selection of a pipeline realignment capable of avoiding identified impacts to the greatest extent possible. Mitigation for remaining impacts should be identified in the FEIS.

FA14-1 Thank you for your comment. The staff utilized the best available information in evaluating potential impact associated with the construction of both projects, and has concluded that its recommended mitigation measures would minimize or eliminate the majority of significant impacts identified.

FA14-2 Additional information has been included in the Final EIS.

FA14-3 Please see the Final EIS: Chapter 3C, 3E, 3L, 3M, 4C, 4E, 4L, 4M, 5, and 6, and Appendix F for a further discussion of impact of the Moyie River Valley. These chapters discuss impact associated with construction along the Moyie River proposed route and the Camp Nine Alternative, and evaluate a detailed mitigation plan proposed by PGT. Based on the discussion contained in the Final EIS, the staff concludes that impact on Waters of the U.S. would be minimized to the maximum extent practicable, as required by Section 404(b)(1).

FA-76

Thank you for the opportunity to review this DEIS. Please send three copies of the FEIS to this office, the Region VIII office, and the Region X office at the same time that it is filed with our Washington, D.C. headquarters. If you have any questions, please do not hesitate to contact me at FTS 484-1510, or your staff may contact Jacqueline Wyland at FTS 484-1584.

Sincerely,
Jacqueline Wyland
Deanna M. Wieman
Director, Office of External Affairs

cc: Dick Sanderson, EPA HQs
Gene Kersey, EPA Region VIII
Sally Brough, EPA Region X
USFWS, Portland
USFWS, Sacramento
COE, South Pacific Division, San Francisco
COE, Omaha District
NMFS, Santa Rosa
CEQ, Dinah Bear

[Department of the Army, Portland District Corps of Engineers, Portland, Oregon]

CP90-1375

DEPARTMENT OF THE ARMY
PORTLAND DISTRICT CORPS OF ENGINEERS
P O BOX 2946
PORTLAND OREGON 97208-2946

Reply to
Attention of

March 1, 1991

91 MAR -5 PM 4:09

Planning and Engineering Division

SUBJECT: PGT/PG&E and Altamont Natural Gas Pipeline Projects, Draft EIS. Dated January 1991.

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE.
Washington, DC 20426

Dear Ms. Cashell:

FA15-1 We have review the subject Draft EIS and would like to suggest that an additional figure be added to the document. That is an additional map similar to figure 2-14, page 2-68 of the Draft EIS that shows all parts of the routes being considered, the alternatives and their alternates.

Sincerely

W. B. Paynter
Chief, Regulatory and Environmental
Resource Branch
Planning and Engineering Division

Copy Furnished:

CENPD-CO-R (Zammit)

FA15-1 Figure 2-14 illustrates "Interstate Natural Gas Pipeline Project Alternatives" to the proposed projects; that is, system alternatives. Detailed maps of both applicants' routes, as well as alternative routes, are shown in Volume II of the DEIS. Overview maps of specific alternative routes considered in the DEIS are also provided in Figures 2-3, 2-4, 2-10, 6-1, 6-2, and 6-3. The staff believes that these maps and figures adequately illustrate the location of the proposed projects and alternative routes under consideration.

FA-78

[U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Terminal Island, California]

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, California 90731

March 4, 1991 F/SWR13:MGT

-8 PM 3:21

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

CP89-460-001
CP91-1375

Dear Ms. Cashell:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) concerning the PGT/PG&E and Altamont Natural Gas Pipeline Projects. We hope that the following comments will help you in completing the Final EIS.

The National Marine Fisheries Service (NMFS) is responsible for preserving and enhancing anadromous fish resources and the habitats that support these resources. The Southwest Region of NMFS has jurisdiction over anadromous resources in California. Anadromous fish may be impacted by the two Sacramento River crossings as well as the crossings at Dutch Slough and the San Joaquin River of the PGT/PG&E project.

The PGT/PG&E Project will cross the Sacramento River twice (approximate River Miles 245 and 3) also Dutch Slough once and the San Joaquin once. You state on page 4F-8 that winter-run chinook salmon are "emergency listed" as threatened under the Federal Endangered Species Act (ESA). As of November 30, 1990 a final listing of winter-run as threatened, is in effect (55 CFR, No. 214, 46515).

The DEIS also describes the Sacramento River primarily as a conduit for migration. This, in general, is the case. However, spawning does occur at the upper river project site. Spawning also occurs below Red Bluff Diversion Dam to Hamilton City (approximate River Mile 200). Winter-run chinook salmon occur in the upper river project area for most of the year either as adults or juveniles. In the lower river project area, various life stages of winter-run chinook are generally present from October to June.

FA16-1 The EIS mentions several variations for river crossings. We strongly recommend that PGT/PG&E use the directional drilling method at the upper river project site. If they use this method and, stipulate in advance to certain timing windows for the lower river sites, ESA Section 7 consultation may be completed informally. Timing in the lower river and the delta allows in-water work generally between late June and late September. Whichever method is selected Section 7 consultation should be undertaken and resolved before completion of the Final EIS.

FA16-1 Thank you for this information. PGT is currently investigating the feasibility of directionally drilling the Upper Sacramento River crossing. However, at this time, PGT does not know if this method of installation is feasible. The FERC staff reflected this uncertainty in its Biological Assessment, a copy of which was sent to the commentor on February 22, 1991, and determined that construction of PG&E's facilities would affect, but would not jeopardize, the winter-run chinook salmon. Based on its determination of affect, the FERC staff has initiated Formal Consultation with the Nation Marine Fisheries Service.

If you have questions concerning these commente or wish to discuss the project further, please contact Michael Thabault of my staff at: National Marine Fisheries Service, 777 Sonoma Avenue, Room 325, Santa Rosa, California 95404; telephone (707) 578-7513. Questions specifically relating to winter-run should be addressed to James H. Lecky of my staff at: National Marine Fisheries Service, 300 South Ferry Street, Terminal Island, California 90731.

Sincerely,

Gary Smith

E.C. Fullerton
Regional Director

State Agency Comments

STATE AGENCIES

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[Washington State Department of Natural Resources]

WASHINGTON STATE DEPARTMENT OF
Natural Resources

BRIAN BOYLE
Commissioner of Public Lands

OLYMPIA, WA 98504

January 23, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

91 JAN 25 AM 11:31

SA1-1 Thank you for allowing us an opportunity to review these documents.

Sincerely,

David F. Dietzman
Manager, SEPA Center

Equal Opportunity/Affirmative Action Employer

SA1-1 Thank you for your comment.

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JAN 2 9 19

ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

SA-2

[Idaho State Historical Society]

IDAHO STATE HISTORICAL SOCIETY

CECIL D. ANDRUS, Governor

January 24, 1990

Dr. David L. Crowder
Director
210 Main St
Boise Idaho 83702
208 334 3890

Archaeology
210 Main St
Boise Idaho 83702
208 334 3847

Education
610 N. Julia Davis Dr
Boise Idaho 83702
208 334 2120

Genealogical Library
610 N. Julia Davis Dr
Boise Idaho 83702
208 334 2305

Historic Preservation
210 Main St
Boise Idaho 83702
208 334 3847 3861

Library and Archives
610 N. Julia Davis Dr
Boise Idaho 83702
208 334 3356

Museum
610 N. Julia Davis Dr
Boise Idaho 83702
208 334 2120

Old Idaho Penitentiary
2445 Old Penitentiary Rd
Boise Idaho 83712
208 334 2844

Oral History
210 Main St
Boise Idaho 83702
208 334 3863

Publications
610 N. Julia Davis Dr
Boise Idaho 83702
208 334 3428

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RE: PGT/PG&E and Altamont Natural Gas Pipeline Projects:
Draft Environmental Impact Statement

Thank you for forwarding the draft EIS for the PGT/PG&E Pipeline Expansion Project. Loops 1 and 2 of the project will cross the Idaho Panhandle from Eastport to Post Falls, Idaho.

SA2-1 Chapter 4M. "Enviromental Consequences: Cultural Resources and Palaeontology" which describes sites identified within the APE in Idaho discusses only one prehistoric in the Idaho portion. However, three additional prehistoric sites, 10BY309, 10BY350, and 10BY222, were recorded after the initial archaeological survey of the project route. These sites are located within the ROW and will be tested in Phase 2 investigations. Enclosed is page 6-11 from PGT-PG&E's Cultural Resources Assessment Report which provides a brief description of the prehistoric sites.

If you have any questions, please feel free to contact Suzi Neitzel at 208-334-3847.

Sincerely,

Donald W. Watts

Donald W. Watts
Deputy State Historic
Preservation Officer

DWW/spn
cc: Ms. Nancy Ridgeway, PGE-PGT
Mr. Mark C. Kalpin, FERC

Celebrate IDAHO
1890 · CENTENNIAL · 1990

SA2-1 Thank you for this information. Please see revised Chapters 3M, 4M, and 6.

The historic sites can be evaluated in the context of these phases and in their ability to contribute information on the specific research questions of economy, demography, social organization, and settlement patterns. These constitute the means of assessing significance relevant to 36CFR60.4(d). Criterion "a" may also be invoked if association with themes of national, state, or local history can be demonstrated and if the property represents a series of events that made a significant contribution to the development of a community, the state or the nation.

6.2.1 Evaluations

Site integrity, the adequacy of information to make an evaluation, and the potential of the sites to address important research questions are considered in resource evaluation. A summary of evaluations is presented in Table 6.2-1. Notable site attributes or qualities vis-à-vis significance evaluation are presented below.

The four prehistoric sites found by this survey comprise two-thirds of the sites presently known in the American portion of the Moyie River Valley. Their patterned locations alone are important additions to the study of local prehistoric settlement systems. More information about extent and content of the sites is needed to complete evaluation. Sites 10-BY-309 and 10-BY-222 have strong potential for buried cultural deposits which would contribute to studies associated with prehistoric research domains. Sites 10-BY-350 and 10-BY-409 it must be determined if the FAR is associated with prehistoric activity. At all of the sites it is important to determine if additional data categories are present and to assess site integrity and boundaries in relation to the APE.

Site 10-BY-409 may be important as only the second recorded prehistoric site in the Moyie Valley south of the International Boundary. Still, its status as an archaeological site remains to be confirmed. More information about extent and content of the site are needed to complete evaluation of the fire-altered rock (FAR) scatter. It must be determined if the FAR is associated with prehistoric human activity and if additional data categories are present. If this location should prove archaeological, site dimensions must be ascertained. No judgement of NRHP eligibility can be made at this time.

Eight of the identified sites are roadside refuse dumps associated with Road System Development (10-BY-406, -407, -408, -410, -411, -412, 10-BR-795, 10-KA-286). Many are barely old enough to qualify for recording; the estimated ages of several extend into the 1950s or later. Conceivably, a study of rural refuse-disposal site contents could be undertaken to document consumer patterns and address questions about the local economy. However, archival data and oral history are better sources of information about such topics.

State of Idaho
DEPARTMENT OF HEALTH AND WELFARE
Division of Environmental Quality

CECIL D. ANDRUS
Governor
RICHARD P. DONOVAN
Director

2110 Ironwood Parkway
Coeur d'Alene, ID 83814
(208) 667-3524

SA-4

[Idaho Department of Health and Welfare, Division of Environmental Quality]

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FEB 12 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

February 8, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Re: Draft Environmental Impact Statement
Docket Nos. CP89-460-001 and CP90-1375-000
PGE/PGT Expansion Project

Dear Ms. Cashell,

We have reviewed the subject DEIS on the proposed natural gas pipeline expansions. Our agency's area of concern is water quality in the State of Idaho. The PGT/PGE project will be especially sensitive in the Moyie River area. The Moyie River is a Special Resource Water, hence high water quality is needed to protect benefical uses including salmonid spawning and domestic water supply. In the interest of protecting that water quality, our comments on the DEIS result from two general areas of concern. They are:

1) Large scale construction projects may create large amounts of unprotected soil. Turbidity, as a result of erosion from unprotected sites, can be detrimental to adjacent waters. The Moyie River basin can receive substantial rainfall events even in the "dry" months of July and August. Runoff, and the subsequent erosion potentail due to poor soils, will require a conscious effort to minimize sediment leaving the work site and entering the river. Additional turbidity will be generated from project operations in the Moyie River as channel crossings are constructed.

2) The use and disposal of hydrostatic test water are also of concern. Pulling source water from the Moyie River at the DEIS recommended rate of not more than 10% (p. 6-31) will not likely impact water quality. The impacts of the hydrostatic testing on the water, including the effect of the epoxy paint lining the pipeline on the water, and the impacts of the discharge to the river are less well documented.

In view of the above concerns, our DEIS comments are as follows:

1) p. 2-3,2-33,4C-2,4C-11. Clearing, grading, and spoils.

SA3-1	Sediment control BMP's are to be used at all cleared sites to minimize off-site sediment transport. Controls are to be installed after clearing is completed, prior to use of the area by heavy equipment. No area is to be cleared that will not see immediate use. Likewise, when use of a cleared area is completed, restoration and revegetation efforts will begin immediately. All spoil banks will also be protected from erosion by use of covering, silt fencing, and/or hay bales. Spoil placement shall be at least 25 feet (vs. 10') from streambanks.	SA3-1	The FERC staff has determined that its recommended "Erosion Control, Revegetation, and Maintenance Plan" (Appendix B-1) and "Stream and Wetland Construction and Mitigation Procedures" (Appendix C-3) are sufficient to minimize or eliminate erosion related impact on the environment. Commentor's proposed 25-foot setback for spoil piles on streambanks would result in increased environmental impact, due to increased disturbance from construction equipment travel on stream banks and stream beds.
SA3-2	2) p. 4C-11, 4C-12, 4C-13, C-1-1. Staging areas and crossings. Staging areas are generally located next to each stream crossing. No access to those staging areas relocated due to wetlands shall be via the stream channel. Any rock used to construct temporary stream crossings shall be clean, angular material of sufficient size to prevent movement and erosive forces. Given the significant cummulative turbidity and sedimentation impacts on water quality anticipated from construction of the Moyie River crossings, diversion techniques at major stream crossings should be considered. Trenching, pipe installation, backfilling, and re-armoring the streambed would then be performed "dry", minimizing suspended sediments downstream.	SA3-2	See response to Comment SA3-1. In addition, "dry" crossings of the Moyie River are not practicable due to the width and water flow of each crossing.
SA3-3	3) p. 2-37, 4C-12, 4C-13. Hydrostatic testing. Permission to discharge hydrostatic test water to the Moyie River will be allowed if chemical composition from previous testing and leaching data from the epxoy paint lining is presented to IDEQ and the discharge is determined to comply with state water quality standards. PGT/PGE will be asked to monitor the discharge and receiving water to ensure that degradation is not occuring. Downstream water utilities shall also be notified in advance of the discharge.	SA3-3	Thank you for informing us of the IDEQ's permit requirements.
SA3-4	4)p. 2-40, 4C-11, 6-32, B-1-1,. Timing and revegetation. From a strictly water quality standpoint, the time window for construction shall be during months of low flow and rainfall. Local NOAA rainfall data for the Moyie area indicates that July and August are the lowest rainfall months (significant rainfall can occur over brief periods, hence erosion control is still needed). Revegetation efforts will be more successful if grass is sown during September while temperatures are still condusive to germination. If grass can germinate before winter, a root system will be in place to hold sediment when spring snowmelt occurs. Physical erosion control structures should remain in place until after the following spring snowmelt has occurred and grasses have become established. Barring fisheries needs, we recommend that construction activities in the Moyie River area be limited to July and August, and that seeding for revegetation be in place by September 1.	SA3-4	Thank you for your comment. Please see revised Chapters 4C, 4F and 6.
SA3-5	IDEQ staff would like clarification of the FERC Staff Recommended Mitigation Measures for the PGT Project #22 on page 6-32 of the DEIS. That measure recommends 16-20-0 fertilizer be applied at a rate of 60 pounds nitrogen per acre. The rate seems excessive in light of current forest practices in the north Idaho area. Our concern is that over-application of fertilizer will	SA3-5	Thank you for your concern. This recommendation was developed based on information provided by the Soil Conservation Service, Bonner County, and Kootenai County. Please see revised Chapter 4 and revised recommendation in Chapter 6.

SA-6

result in excessive nitrate and phosphate loading in nearby water bodies, contributing to degredation of the water quality. Fertilizer types and rates will be approprite and consistent with local conditions and current practices.

If the above comments are implemented, the project should have minimal impacts on surface water quality in Idaho. Thank you for the opportunity to comment on this DEIS.

Sincerely,

Brian Cochrane
Water Quality Compliance officer

BC:bc

cc: Mr. Mark C. Kaplin

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FEB 12

ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Oregon

DEPARTMENT
OF FORESTRY

State Foresters Office

"STEWARDSHIP IN FORESTRY"

File 7-0-8-200

February 6, 1991

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street N.E.
Washington, D.C. 20426

SUBJECT: COMMENTS on Docket Nos. CP89-460-001 and CP90-1375-000

Dear Ms Cashell:

We have received notice of the above and offer the following comments in regards to the proposed project.

This Department is responsible for fire protection on private forest lands in Oregon and all BLM lands in western Oregon. Prior to commencing operations on any forest land in Oregon, state laws require that contractors must notify the State Forester of that operation (ORS 527.670), obtain a permit to use power driven machinery (ORS 477.625) and if applicable; obtain a permit to clear rights-of-way (ORS 477.685).

This Department has a continuing concern with the construction of power lines through forested areas. In 1989, 38 forest fires were associated with such power lines.

The Oregon State Board of Forestry and this Department are also concerned with reduction of the State's forest land base and associated losses of timber revenue, jobs, wages and other benefits. This loss of forest land base over the years has been due to many factors, including conversion of forest land to energy related uses.

Because of these concerns, we would like to see the following information provided in the analysis of this project:

SA4-1
1. What values were used to arrive at estimated forest productivity losses for timber stumpage, wages, taxes, recreation, fish and wildlife?

1

2600 State Street
Salem, OR 97310
(503) 378-2560

SA4-1 No estimate of economic losses associated with the loss of forest productivity was prepared because these impacts were determined to be less-than-significant. Please see Chapter 4G, "Socioeconomics", Criteria for Determining Significance.

SA4-2 2. Was the estimated value lost from forest productivity included in the economic analysis of the proposed project? Where is it located?

SA4-3 3. Pages 2-19 and 2-20 state that loops 6 and 7 (both containing forest lands) would be located within the existing ROW adjacent to the existing pipeline. This does not indicate a permanent loss of any additional forest land outside the ROW. However, page 3D-2 appears to indicate that there would be a permanent loss of 1,481.7 acres of commercial forest land to ROW. How do you reconcile these two data?

SA4-4 4. Pages 3D-2, 4G-8 and D-2-4 indicate that 1,959 acres of commercial forest land will be cleared/disturbed during construction on the ROW. However, page 4E-31 indicates only 1,118 acres of forest land will be allowed to regenerate. What happened to the remaining 841 acres?

SA4-5 5. Page 4E-31 is supposed to list impacts and mitigation measures for vegetation and wildlife in Oregon. Only impacts are mentioned. Mitigation efforts in the form of replanting the construction disturbed/cleared 1,959 acres of forest lands outside the ROW is not mentioned. Why not?

SA4-6 6. Page 2-36 lists two possible storage areas and land requirements for each. Maps 11 of 21 and 12 of 21 indicate by their "Vegetation" lines that both of these areas may be located on commercial forest land. If that is the case, we strongly recommend that these two storage areas be moved to a non-commercial forest location.

The answers to these questions will be useful to us in making our analysis of the effect of this proposed project on the State's forest resources.

Please contact Bob Bourhill (phone 503-378-2553) if you need clarification.

Sincerely,

David H. Stere, Director
Forest Resource Planning

DHS/BB
cc: Mark C. Kalpin

SA4-2 Please see response to Comment SA4-1.

SA4-3 Thank you for this information. Please see revised Chapters 3D, 4E, 4G and 6.

SA4-4 See response to Comment SA4-3.

SA4-5 PGT has proposed to allow the cleared construction right-of-way to naturally revegetate with woody vegetation. The staff believes that PGT's proposed mitigation is acceptable and adequate. The Oregon Department of Forestry is free to attach additional mitigation to any state-issued permits that it feels are necessary to mitigate environmental impacts

SA4-6 The staff has reviewed the environmental impacts associated with the use of these two proposed storage area sites, and has determined that these impacts are less-than-significant. Actual use of these sites will depend on the results of negotiations between PGT and the landowner.

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 -(208) 327-7900

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

31 January 1991

RECEIVED BY
FEB 20 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Ms. Cashell:

SUBJECT: Comments on PGT/PG&E and Altamont Natural Gas Pipeline Projects, Draft Environmental Impact Statement.

I have reviewed those parts of the above draft environmental impact statement that pertain to Idaho, and offer the following comments:

SA5-1 (1) General: The draft EIS should apply to only the PGT/PG&E project. As written, it is difficult to follow because of the mixture of information and analyses relative to the two projects.

SA5-2 (2) Section 2.3, Description of Existing Facilities: The existing pipeline loops should be described and enumerated in this section. This would be of considerable help in determining how the new construction would tie-in with the existing facilities.

SA5-3 (3) Page 3E-17: The section describing waterfowl habitat within the pipeline vicinity in Idaho should include harlequin duck habitat within the Moyie River drainage.

SA5-4 (4) Chapters 3 and 4: The Loop 1 alternative is not discussed in the sections describing the affected environment and the environmental consequences. Proper evaluation of this alternative would require detailed comparative data.

Please provide us with a copy of the final EIS. Thank you for the opportunity to comment.

Sincerely,

William G. Graham

William G. Graham, Manager
Northern Basins Section
Water Planning Bureau

cc: M.C. Kalpin

[Idaho Department of Water Resources]

SA5-1 For purposes of administrative convenience, the FERC staff included both the PGT/PG&E and Altamont Projects in the same document.

SA5-2 The FERC staff's document focuses on the construction and operation of proposed facilities, as required by the National Environmental Policy Act. A description of existing facilities where no construction is proposed to occur is beyond the scope of NEPA and the FERC's document.

SA5-3 Thank you for your comment. This information is already included in Table 3E-3.

SA5-4 As indicated in Chapters 4 and 6, the Camp Nine Alternative presented in the Draft EIS is a preliminary alternative route that was developed by the FERC staff as a result of its environmental analysis. The FERC staff has actively solicited input from federal, state and local agencies, as well as affected landowners, during the public comment period on the Draft EIS. Please see a discussion of this process in revised Chapter 6.

SA-10

[Montana State Historic Preservation Office]

State Historic Preservation Office
Montana Historical Society
Mailing Address: 225 North Roberts • Helena, MT 59620-9990
Office Address: 102 Broadway • Helena, MT • (406) 444 7715

FILED
OFFICE OF THE SECRETARY
91 FEB 26 AM 0:54

February 20, 1991

Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Altamont Natural Gas Pipeline Draft EIS. CP90-1375-000

Dear Ms. Cashell:

Thank you for this opportunity to comment on the above cited document. I will limit my comments to the assessment of cultural resource impacts in the Montana section of the proposed Altamont line.

As stated in the document (pg. 6-20), significant adverse impacts to cultural resources may occur in Montana if properties eligible for the National Register of Historic Places are located within the proposed construction right-of-way. However, as very little of this route has been surveyed for the identification of these potentially eligible cultural resources, it would not appear to me to be possible to make substantive statements or evaluations on the actual impacts of the project on these resources in Montana at this time.

In lieu of available information, the procedures outlined for the identification of significant cultural resources in the project impact area appear relevant. Most critical in this regard is the work plan (also referred to previously as the "Pre-Inventory Report") for surveying those portions of the route which have not been previously surveyed. My recommendations for this work plan are as follows:

SA6-1 1. The work plan should be sufficiently detailed to anticipate how cultural resource properties likely to occur in the impact area will be recorded in a manner adequate for evaluating the significance of these properties.

SA6-2 2. The work plan should be made available sufficiently in advance of the proposed field inventory to allow for comment and revisions, as necessary. A meeting of the cultural resource representatives within the various involved agencies with FERC and the applicant's (Altamont's) cultural resource specialists to discuss the draft work plan is encouraged.

SA6-3 3. In addition to involved federal land-managing agencies and other interested parties (including Native American tribes), the Advisory Council on Historic Preservation should be invited to comment on the work plan for the identification and evaluation of cultural resources. Given the scope of this undertaking and its likely effect on cultural resources, to be addressed under 36CFR800, the involvement of the Advisory Council in the development of the work plan will greatly facilitate discussion and decision-making in matters that will eventually require their participation. Given also that the proposed project is large and complex, a programmatic agreement with the Advisory Council to consider impacts to significant cultural resources, pursuant to 36CFR800.13, may be deemed appropriate.

SA6-1 Thank you for your comments. On March 11, 1991, we forwarded a revised Pre-Inventory Report and Historic Properties Identification Plan and Management Plan to your office for review and comment. If your recommendations have not been adequately addressed in the revised Plan, the comment period for the document will allow for integration of any further concerns that you might have.

SA6-2 The cultural resources management plan and historic properties identification plan was forwarded to the Advisory Council on March 28, 1991 by Altamont for your information.

SA6-3 See response to Comment FA11-6.

I appreciate FERC's active involvement to date in the assessment of potential impacts to Montana's significant cultural resource properties from this project. I look forward especially to the review of the proposed work plan and hope you will give serious consideration to the above comments as you proceed in its development.

Sincerely,

Mark Baumler

Mark F. Baumler, Ph.D.
Deputy SHPO/Archaeologist

cc Laurence J. Sauter, Jr., Altamont Project Manager

File: FERC/Altamont/#1375

FERC0220 EIS

SA-12

[State of Montana]

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

STAN STEPHENS, GOVERNOR

LEE METCALF BUILDING
1520 EAST SIXTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-6699
TELEFAX NUMBER (406) 444-6721

HELENA, MONTANA 59620-2301

March 1, 1991

Mr. Larry Sauter
Altamont Project Manager
Environmental Compliance Branch
Office of Pipeline and Producer Regulation
Federal Energy Regulatory Commission
825 N. Capitol St. NE
Washington, D.C. 20426
VIA FED EX

RECEIVED BY
MAR 04 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Dear Larry:

Attached are the final comments of the State of Montana on FERC's PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (DEIS). The comments reflect the discussions we had with you on Wednesday in Billings. Specifically, we have removed or amended several comments concerning river and stream crossings in Montana. The comments are now more stream-specific. As you suggested, we will adopt the FERC's standard provisions for construction across minor and major streams and will specify more stringent requirements in state permit instruments where required.

SA7-1 Twenty-four persons attended the supplemental public meeting hosted by DNRC and the BLM in Havre last night. A copy of the sign-in sheet is enclosed. No formal comments on the DEIS were submitted. There were a number of questions and subsequent discussion, however, on project land acquisition, reclamation and weed control, access road management, hydrostatic testing water availability and disposal, producer access, marketing of pipeline capacity, and construction scheduling.

SA7-1 Thank you for this information. We have placed the sign-in sheet in our public meeting files.

The agencies of the State of Montana appreciate the opportunity to comment on the DEIS and to review those comments with you. Please contact me if we can assist you with additional analysis or information.

Sincerely,

Art Compton, Chief
Facility Siting Bureau
Energy Division

AC

COMMENTS OF THE STATE OF MONTANA
DRAFT EIS
ALTAMONT NATURAL GAS PIPELINE PROJECT

	Chapter/ Page	Paragraph/ line	Comment
SA7-2	S-20		Number of federally listed or proposed threatened or endangered fish species potentially affected for Altamont should be two, not one as listed (Pallid sturgeon and paddlefish).
SA7-3	1-5	2/2	Delete proposed; it should read, "connect to the Kern River pipeline."
SA7-4	2-4	Last para/4	To Rivers, Streams, Backwaters, and Wash Crossings, add the following underlined portions: "...For streams and rivers with designated floodplains, the pipeline would be placed a minimum of 6 feet below the maximum calculated scour depth or at least twice the maximum calculated scour depth, whichever is greater, for the 100-year flood of the stream or river. The maximum depth of scour would be determined from any of the accepted hydraulic engineering methods, but the final calculated depth would be subject to approval by the MDNRC (ARM 36.15.602(4)(c)). A plug of unexcavated soils..."
SA7-5	2-6	2/-	If the epoxy will be applied at a special coating yard(s), the state requests additional information on the location of coating yard(s); the hazardous/ contamination qualities of the epoxy and cleaning solutions, or the conditions under which these materials would pose hazards; plans to minimize soil contamination, clean up plans should an accidental spill occur; etc.
SA7-6	2-9		Surveillance. There is no monitoring method described for stream crossings. These should be monitored as well, and the method described.
SA7-7	3A-12	2/5	Add: "and sandstone" to the end of the sentence.
SA7-8	3D-9	2/-	The following recreation baseline table provides information on angler use and activity on the major river/stream crossings in Montana. This information should be incorporated to allow the reader to draw conclusions about the relative importance of recreation on these waters.

SA7-2	According to the U.S. Fish and Wildlife Service, only the pallid sturgeon is Federally listed as endangered. The paddlefish is neither listed nor proposed, but remains a Federal candidate species.
SA7-3	Comment accepted. See change to Chapter 2.
SA7-4	The suggested change is only relevant to crossings in Montana, and would therefore be inappropriate in a generic construction discussion presented for both pipeline projects. At Montana's request, this language was included in the DEIS's common impacts discussion in Chapter 4C.
SA7-5	Altamont's pipe would be epoxy coated at the point of manufacturer.
SA7-6	Pipeline surveillance at stream crossings would be conducted as part of the routine aerial and surface patrols described.
SA7-7	See revised paragraph.
SA7-8	Comment accepted. See revised Chapter 3D and new Table 3D-7.

SA7-9	3E-1		The Montana Natural Heritage Program lists of special status vegetation and wildlife should be listed. The state will provide this list.
SA7-10	3E-2	end of last para	Add: "Federal laws administered by the USFWS require replacement of wetlands which are damaged in construction on a one-for-one basis."
SA7-11	3E-5	1	All riparian habitat, forest and grassland, has been greatly reduced in extent and quality. In prairie and grassland settings, riparian habitat is critical to the survival of wildlife.
SA7-12	3F-6	3/-	The pallid sturgeon, a Federal Endangered Species, has also been documented in the Wild & Scenic reach of the Missouri. The species is endangered by habitat modification, hybridization, apparent lack of natural reproduction, and excessive harvest. Agencies are required under the Endangered Species Act of 1973 to ensure that activities they authorise, fund or carry out are not likely to jeopardise the continued existence of the species or destroy or adversely modify its critical habitat.
SA7-13	3F-6	5/-	Foot #2 relates to Musselshell.
SA7-14	3F-7		Add mountain whitefish to cold water game fish in table 3F-3, as attached.
SA7-15	3F-6	6/-	Delete last sentence "No critical...." Add footnote #2.
SA7-16	3F-9	2/	The Yellowstone is a Class II fishery, not a Class III (MBIS, 1991). Fish population estimates for two reaches immediately above and below the crossing indicate 500-1000 trout per mile, roughly half those found in the world-famous Madison River. The ling fishery is good as well. The Yellowstone in this reach gets heavy floater and boater use. Obtaining another access site for boats in this area is a top priority for the regional office of MDFWP (written comm. 1991, Jim Derling). These factors indicate it is a valuable recreation resource.
SA7-17	3G-7	Table 3G-5	Add a column that shows typical mid-summer occupancy rates for temporary accommodations along the route. This information can be found in Table 4-21 (copy attached) of Volume IIA (Environmental Report) of Altamont's Dec 89 Application to FERC. The data indicates that summer tourists and recreationists place a substantial demand on motel and RV/campground

SA7-9	No list was provided. However, as stated in Chapter 3 of the DEIS, species listed by state heritage programs were not considered special-status species unless they had official state recognition.
SA7-10	We are unaware of any Federal law which mandates this action. This comment possibly refers to the U.S. Fish and Wildlife Service (FWS) Mitigation Policy, which is an internal FWS policy and non-binding on other Federal agencies. See 46 FR 7656 (January 23, 1981).
SA7-11	Thank you for this information.
SA7-12	Comment noted. Please see revisions to Chapter 4F.
SA7-13	Comment accepted. See change to Chapter 3F.
SA7-14	Comment accepted. See change to DEIS Table 3F-3.
SA7-15	Our statement stands. No critical habitat is presently known to exist at the proposed crossing location.
SA7-16	Comment accepted. See change to Chapter 3F.
SA7-17	Chapter 3G provides a description of the existing temporary housing in the vicinity of the route. Chapter 4G addresses the expected availability.

SA7-17 (cont.)			facilities in central Montana, using up to 90% of available motel rooms and 99% of available campsites and RV spaces along any single construction spread.	
SA7-18	3G-8	1/1	The estimate of available temporary housing is overstated if it is based on the total number of units and is not adjusted to reflect the large demand from summer tourists and recreationists in central Montana. Summertime lodging can be difficult to find.	SA7-18 See response to Comment SA7-17 above.
SA7-19	3G-8	2/1	Add: "Seasonal demands on temporary housing in central Montana account for 70-99% of the available temporary housing in communities along the route (Altamont 1989).	SA7-19 See response to Comment SA7-17 above. Altamont's statement refers only to Montana campgrounds.
SA7-20	4A-5	b & c	This could oversaturate other parts of the slope and cause instability there.	SA7-20 Thank you for this information.
SA7-21	4A-6	d	The north portion of the route through Arrow Creek badlands follows along the toe of an old landslide. This landslide appears to be quite stable now, so should not pose the danger suggested here. In general, this comment is valid.	SA7-21 Thank you for this information.
SA7-22	4B-5	1/7	These effects occur whether in agricultural cropland, range land, riparian zones or elsewhere.	SA7-22 Comment accepted. See change to Chapter 4B.
SA7-23	4B-5	3	Revise to include "other improved lands" and "residential areas" with "agricultural lands", which may use either the full work area method or ditch plus spoilside method.	SA7-23 Comment accepted. See revisions to Chapter 4B and Appendix B-1.
SA7-24	4B-7		The "careful inspection" required by Altamont's proposed seed mixes would require the presence of a professional. Altamont continually maintains there will be no long term impacts; however, introducing non-native species, and eliminating naturally-occurring species of plants along the ROW will be a permanent impact. We have the technology available to restore the affected environment, and MEPA charges us to do so to the fullest extent possible. In order to minimize permanent impact (i.e., changes to flora), reseeding with a suite of species indigenous to the area is recommended. Careful soil testing is not always required when a professional is on site; floral changes are recognizable without testing for soil characteristics. See discussions on individual changes recommended by FERC for the revegetation mixes.	SA7-24 Comment noted. As referenced in Appendix B-1, the environmental inspector must be a qualified professional, familiar with soils and conservation plantings in the area.
SA7-25	4B-10	2/	The Bearpaw shale is a member of the Montana Group, an upper Cretaceous unit which overlies the Colorado Group. Referring to the Colorado shale as "bear paw" is a potential source of confusion.	SA7-25 Comment accepted. See change to Chapter 4B.

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SA7-26	4C-2	6/-	Construction across streams is planned for low flow periods, when even "trout streams" have reduced Dissolved Oxygen. It is misleading to suggest they are immune to the impact just because the flow in these streams may be lower. Trout have a certain tolerance limit.	SA7-26	Comment noted. Dissolved oxygen impact at trout streams is generally less of a problem than at other streams because (a) their gravelly, rubble bottoms result in less construction related turbidity, and (b) faster-flowing streams tend to reoxygenate themselves quicker than slow-moving streams.
SA7-27	4C-4	4	The affected stretch of the Milk River is closed year-round to direct diversion (Larsen 1991). Altamont has several options by which to obtain the water, but should allow a nine month period in which to do this.	SA7-27	Thank you for this information.
SA7-28	4C-R	1/	Water used for the hydrostatic testing of pipeline north of the Missouri River near Lonesome Lake should come from the Milk River drainage. Presently there are no carp in the Milk River drainage, but there are in the Missouri. Geomorphic controls on drainage would route any flowing water from Lonesome Lake to Big Sandy Creek, which flows into the Milk. The Milk River drainage must be protected from carp introduction.	SA7-28	Thank you for this information.
SA7-29	4C-11		FERC recommends completion of in-stream trenching and backfill work within 48-72 hours (Appendix C-3-2). Conoco was able to complete such work in less than 12 hours on a large stream (Belt Creek). Twelve to 24 hours is more sensible, and may be required in state crossing permits.	SA7-29	Thank you for your comment.
SA7-30	4C-12	6/-	Site-specific design and procedures for sensitive stream and river crossings should be incorporated in the FEIS to afford agencies and the public the opportunity for review. This should include not only the rivers in Table 4C-5, but also the Musselshell River and Rock Creek in Montana. Add: "Designs and procedures for the following river crossings should be developed in close coordination with the appropriate federal and state agencies, affected landowners, and other interested parties, and must be filed with the Secretary of the Commission and submitted for inclusion in the final EIS: Milk River, Missouri River, Judith River, Musselshell River, Yellowstone River, Rock Creek nd Clark's Fork Yellowstone River. In addition, site specific plans should be included for Flat Creek, Rose Fork Creek, and East Fork Roberts Creek."	SA7-30	Site-specific stream and river crossing designs and procedures will not be available prior to issuance of the FEIS. However, the staff's subsequent review of these designs and procedure's would insure that impacts are avoided or reduced to nonsignificant levels prior to construction. Altamont is required b the staff's stream and Wetland Construction and Mitigation Procedures to develop site-specific construction plans for waterbodies greater than 100 feet wide in close coordination with appropriate Federal and state agencies. In conjunction with Montana's floodplain development and easement grant requirements (see Table 1-4), we feel that an opportunity for state agency and public review of the construction plans for the subject rivers would be afforded.
SA7-31	4C-15	3/-	Add: "Designs and procedures for river crossings listed on p 4C-12 should be developed in close coordination with the appropriate Federal and state agencies, affected landowners, and other interested parties, and must be filed with the Secretary of the Commission and submitted for inclusion in the final EIS."	SA7-31	See response to Comment SA7-30 above.

SA7-32	4C-15	after Milk R.	Add: "Montana - Flat Creek. Increased Sedimentation and Decreased Water Quality. A realignment of the route is necessary between MP100 and MP105. This alternative alignment should be developed in close coordination with the appropriate Federal and state agencies, affected landowners, and other interested parties, and must be filed with the Secretary of the Commission and submitted for inclusion in the final EIS.	SA7-32	Route modifications provided to the Montana Department of Natural Resources and Conservation on October 22, 1990, and subsequently filed with the Commission on November 28, 1990, render this comment moot.
SA7-33	4C-15		Add to Milk and Missouri River paragraphs: "It is therefore recommended that an alternative crossing method such as directional drilling be investigated. Designs and procedures for this river crossing should be developed in close coordination with the appropriate Federal and state agencies, affected landowners, and other interested parties, and must be filed with the Secretary of the Commission and submitted for inclusion in the final EIS."	SA7-33	Based on further analysis and information provided since issuance of the DEIS, we have removed the Milk River discussion from Chapter 4C. We have also revised our discussion of directional drilling at the Missouri River. However, site-specific procedures for construction will not be available prior to issuance of the FEIS. Where site-specific construction plans are developed for construction at major water crossings, appropriate federal and state agencies would be involved in the plan reviews.
SA7-34	4C-16	top of page	Add: "Montana - East Fork Roberts Creek. Increased Sedimentation and Decreased Water Quality. A route realignment is recommended between MP 172-174. This alternative alignment should be developed in close coordination with the appropriate Federal and state agencies, affected landowners, and other interested parties, and must be filed with the Secretary of the Commission and submitted for inclusion in the final EIS."	SA7-34	See response to Comment SA7-32 above.
SA7-35	4C-16	3	A 10 inch oil pipeline buried 8 feet deep in a wet crossing downstream (above Billings) required a week of construction in the river bed. Altamont's 30 inch pipeline would require a wider and deeper trench.	SA7-35	Thank you for this information.
SA7-36	4D-9		This discussion should include a statement about the nature of the obstacle to recreation posed by pipeline construction activities, and whether these activities would present a danger to floaters and fishermen. If so, appropriate signing should be installed upstream and a notice printed in the newspapers of local general distribution.	SA7-36	This issue is addressed on DEIS page 4D-10. We agree with the suggested protective measures. See new recommendation in revised Chapters 4D and 6.
SA7-37	4D-9	3/7	Discuss impacts to recreation on the UMNWSR from conventional trenching. This discussion is necessary to provide justification and basis for FERC's directional drilling recommendation.	SA7-37	Recreational impacts associated with conventional trenching of the Missouri River were discussed on DEIS page 4D-10.
SA7-38	4E-9	1/4	Appendix E-3 should be Appendix C-3-1.	SA7-38	Comment accepted. See change to Chapter 4E.
SA7-39	4E-49	5/	In Appendix E-4-1, Eriogonum brevicaule var. canum (wild buckwheat) is listed as a federally listed	SA7-39	Comment accepted. See changes to Table 4E-13 and Appendix E-4.

SA7-39 (cont.)			threatened or endangered species potentially occurring along the Altamont route in Montana. It is not discussed under Special Status Plant Species or listed in Table 4E-13 on page 4E-59. Why not? Also, Rock tansy (Sphaeronia capitata) is discussed on this page but is not listed in Appendix E-4.		
SA7-40	4E-55	Long-billed curlew	A pair of long-billed curlews was observed in June 1990 by DNRC staff approximately 5 miles east of the pipeline along the county road north of Shawmut. This would be a primary access route from Shawmut for construction. They are a Montana species of special concern. To the extent possible, all nests and chicks should be avoided.	SA7-40	Comment noted. See change to Chapter 4E.
SA7-41	4F-3	3/2	Regarding "all crossings, except those of major rivers (greater than 100-ft. wide), could be constructed in less than three days unless otherwise permitted by state agencies.", the State of Montana has been assured that these crossings would take less than a day. Only crossings of large rivers should take more than a day, and even these should be completed in three days or less.	SA7-41	Thank you for this information.
SA7-42	4F-3	4/	The width of disturbance will depend on the trench depth. In the larger rivers, width of disturbance could be very large. Spawning areas immediately downstream will receive increased fines. Trenching during a low flow time of year would mean no flushing flows would be available to clear out the sediment. The sediment deposited downstream would clog interstices and smother fish eggs and macroinvertebrates and allow a new suite of macroinvertebrates to become established. High spring flows would eventually move these sediments downstream, a secondary impact. If there is drought, it may take several years to move all sediment out.	SA7-42	Comment noted. See revised Chapter 4F.
SA7-43	4F-3		Disturbance of a 75-foot width of spawning habitat is very significant, especially in smaller rivers and streams. Many spawning areas may not even be 75 feet wide.	SA7-43	Comment noted.
SA7-44	4F-3		On small streams and rivers, loss of 100 feet of cover on each streambank, plus the loss of any instream cover, is a significant local habitat loss to fish.	SA7-44	See response to Comment SA7-43 above.
SA7-45	4F-8	2/	Missouri River. The Montana Department of State Lands will require feasibility studies on directional drilling before issuing the right-of-way deeds for the Missouri River. A description of the open trench method tailored to the river's particular	SA7-45	Based on our analysis of potential impact to the pallid sturgeon, our recommendation to directionally drill the Missouri stands. Please be aware that installation of this crossing by the open trench method would result in an affect to the pallid sturgeon and would require the FERC staff to initiate formal consultation with the FWS before the recommendation could be waived.

SA7-45 (cont.)

characteristics shall also be submitted. The open trench description shall include depth of trench, width at the top of the trench, method of excavation, projected time for completion, discussion of reclamation, relative costs, and other pertinent information. This information will determine whether the Department will require a specific construction method as a condition of the right-of-way deed.

SA7-46 4F-9 Montana-Yellowstone River

Open trench construction would likely require blasting to comply with the floodplain development permit scour depth requirements. This would have a dramatic short term impact on the aquatics. A Conoco pipeline was exposed by scour in 1989. This 10 inch oil pipeline reburied 8 feet deep in a wet crossing downstream (above Billings) required a week of construction in the river bed. Turbidity of this intensity and duration during spawning season may inhibit brown trout from reaching their spawning grounds upstream in the tributaries. Trenching during a low flow time of year would mean no flushing flows would be available to clear out the sediment. The sediment deposited downstream would clog interstices and smother fish eggs and macroinvertebrates and allow a new suite of macroinvertebrates to become established.

The Montana Department of State Lands will require feasibility studies on directional drilling before issuing the right-of-way deeds for the Yellowstone River. A description of the open trench method tailored to the river's particular characteristics shall also be submitted. The open trench description shall include depth of trench, width at the top of the trench, method of excavation, projected time for completion, discussion of reclamation, relative costs, and other pertinent information. The study should include analysis of a crossing realignment slightly downstream to avoid the steep south slope. This information will determine whether the Department will require a specific construction method as a condition of the right-of-way deed.

SA7-47 4F-9 add to Missouri River

With directional drilling, it is not necessary to use concrete-coated pipe for negative buoyancy due to the depth of burial. Since the soils near the proposed Missouri crossing have tested reactive to concrete, avoiding use of concrete weights is desirable (pers comm. MDOH 1990). Timing is less critical in this method so could facilitate construction deadlines.

Maintenance costs also are reduced as the pipe is buried far below the potential scour depth. This

SA7-46 Thank you for this information. See changes to Chapter 4F.

SA7-47 Comment noted. See change to Chapter 4F. While unnecessary to counter buoyancy, pipe used in directional drilling is generally concrete coated to protect it from abrasion during installation.

SA7-47 (cont.) mitigates the restriction for floodplain development of burying the pipe twice the maximum scour depth."

SA7-48 4G-1 Based on Montana's experience with the Northern Border natural gas pipeline, construction of the Altamont pipeline has potential to have highly disruptive effects in communities located near construction sites. This EIS could help communities and individuals prepare for what will occur, thus enhancing the benefits and reducing the adverse effects of Altamont's development. Pipeline construction's short-term environmental and social consequences may be justified by its long-term economic and taxation effects. For this reason, the EIS should describe the long-term benefits of the project to Montana.

SA7-49 4G-9 3/- The pipeline will be the single most valuable piece of property in some of the counties it crosses. The DEIS should estimate the additional annual property tax receipts accruing to the counties along the route.

SA7-50 4G-9 6/- Again, the heavy summer demand for tourist accommodations must be considered in the determination of the baseline level of housing available and the resulting impact of inmigration of pipeline workers.

SA7-51 4G-9 6/- Billings and Great Falls are within reasonable commuting distances only to particular sections of the construction corridor. The 70-mile "rule of thumb" for commuter travel may only be applicable when good roads are available. For much of the the pipeline route, long travel distances and slow travel times on secondary roads could cause construction workers to seek housing in communities closer to construction sites. Housing impacts need to be analyzed for smaller communities nearer to the corridor.

SA7-52 4G-9 7/- Replace with: "Because summertime tourists and recreationists occupy from 70 to 99% of the available temporary housing in communities along the route (Altamont 1989), there may be insufficient housing to accommodate all construction workers. A worst case scenario for temporary housing availability is 572 motel rooms (90% peak occupancy rate) and 57 camp/RV sites (99% peak occupancy) across the three construction spreads. This number of available units could not accommodate all of the 1283 workers required to construct the project unless there was substantial local recruitment.

"If there is a greater amount of housing available, the in-migrating workforce would still likely occupy most

SA7-48 As stated on DEIS page 4G-1, long-term benefits of the project include the generation of approximately $7 million annually in state and local taxes. This figure is now estimated to be approximately $8.9 million.

SA7-49 Comment noted. See revised Chapter 4G.

SA7-50 Comment noted. See revised "Assumptions and Limitations of Analysis" in Chapter 4G.

SA7-51 Thank you for your comment. This information is presently unavailable. Further, we do not believe that the results of such a study would significantly change the assessment of impacts presented in the FEIS.

SA7-52 We are aware of the potential competition for temporary housing that may occur at times along the route. This possibility is addressed on page 4G-11 of the DEIS. Also, see revised Chapter 4G "Assumptions and Limitations of Analysis".

SA7-52 (cont.)			of the unoccupied units. This event could make it difficult for tourists and recreationists to find lodging. A lack of accommodations could detract from the quality of the recreational experience for many visitors. "Although the lack of available temporary housing will, in any case, drive the occupancy rate below the 5% threshold of significance, the impact will be of short duration, occurring for only one summer season."		
SA7-53	4G-11	2/-	Any solid wastes and/or hazardous wastes generated must be handled in accordance with Title 16, Chapters 14 and 44, Administrative Rules of Montana (ARM). Any such wastes must be sent or delivered for disposal or treatment to facilities licensed or permitted for the management of those specific types of wastes.	SA7-53	Thank you for this information. We have passed it along to Altamont.
SA7-54	4H-1	1/-	The Air Quality Bureau (AQB) requests that the telephone numbers of Altamont employees situated in the vicinity of the construction site be supplied prior to the start of construction. This will establish a means of communication with the construction site to respond to possible complaints from the public.	SA7-54	We have passed your request along to Altamont. In the interim, the public may contact Altamont in Montana at (406) 442-8560 and in Wyoming at (307) 634-8891.
SA7-55	4H-6	1/-	Compressor Station No. 1 will require a State of Montana Air Quality Permit (MAQP) with a prevention of significant deterioration (PSD) review.	SA7-55	Thank you for your comments. These requirements are referenced in Chapter 4H of the DEIS.
	4H-6	2/-	Compressor Stations No. 2 and No. 3 will each require a MAQP.		
SA7-56	5-3	4/-	The EIS should provide a narrative explaining the relationship, if any, between the Altamont pipeline and future natural gas development in Montana. Under what conditions would Montana producers be allowed to market their production via the Altamont system? What could be the pipeline's effects on Montana natural gas production?	SA7-56	A discussion of the relationship between the Altamont Pipeline and future natural gas development or production in Montana would be speculative, and therefore has not been included in the FEIS. As an open-access transporter of natural gas, Altamont would not own any of the gas flowing through its system. Gas entering the system would do so only as a result of contract arrangements between gas purchasers and gas producers.
SA7-57	5-3	4/12	The State of Montana published a draft and final programmatic EIS on oil and gas drilling and production in 1989. The document provides several gas development scenarios in various areas crossed by the pipeline. The information in the EIS is available for incorporation by reference. A copy of the draft is enclosed.	SA7-57	Thank you for this information. We have included a reference to the programmatic EIS in Chapter 5.
SA7-58	6-15	Table 6-2	The number of federally listed or proposed threatened or endangered fish species may need to be 2: the pallid sturgeon which is listed endangered and the	SA7-58	See response to Comment SA7-2 above.

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SA7-58 (cont.) paddlefish which, at this time, is still being reviewed for threatened status.

SA7-59 6-19 1/1 Should mention as well as the paddlefish, which is proposed for listing, blue sucker, sturgeon chub, westslope cutthroat, Yellowstone cutthroat, and northern redbelly dace x finescale dace hybrid, all of which are Montana species of Special Concern.

SA7-60 6-38 Item 50 Same as comments for page 4C-15.

SA7-61 6-38 after 58 Add: "Altamont shall investigate the technical feasibility of crossing the Missouri and Yellowstone rivers using a directional drilling technique."

SA7-62 6-38 anywhere Add: "Altamont shall develop site-specific construction plans for sensitive streams listed on page 4C-12. Designs and procedures for these river crossings should be developed in close coordination with the appropriate Federal and state agencies, affected landowners, and other interested parties, and must be filed with the Secretary of the Commission and submitted for inclusion in the final EIS."

SA7-63 6-41 The Yellowstone River is a Class II fishery (MRIS, 1991), showing the highest angler use days of any river crossing (see Recreation Baseline table). In addition, it gets heavy floater and boater use. Obtaining another access site for boats in this area is a top priority for the regional office of MDFWP. These factors indicate it is a valuable recreation resource.

Open trench construction would likely require blasting to comply with the floodplain development permit scour depth requirements. This would have a dramatic short term impact on the aquatics. A Conoco pipeline was exposed by scour in 1989. This 10 inch oil pipeline buried 8 feet deep in a wet crossing downstream (above Billings) required a week of construction in the river bed. Turbidity of this intensity and duration during spawning season may inhibit brown trout from reaching their spawning grounds upstream in the tributaries. Trenching during a low flow time of year would mean no flushing flows would be available to clear out the sediment. The sediment deposited downstream would clog interstices and smother fish eggs and macroinvertebrates and allow a new suite of macroinvertebrates to become established.

Hydraulics of a gravel bed stream are finely balanced between flow and grain size. Small changes create instability and cause the river to adjust to reattain

SA7-59	Beyond the pallid sturgeon, the six fish species of special concern to Montana are listed in Table 3F-4.
SA7-60	The intent of DEIS recommendation 50 is to facilitate the development of noxious weed control measures within the existing framework of local weed control boards and other appropriate Federal, state, and local parties or individuals. These plans will not be available prior to issuance of the FEIS.
SA7-61	See response to Comment SA7-46 above and changes to Chapter 4C.
SA7-62	Implementation of the staff's Stream and Wetland Construction and Mitigation Procedures (DEIS recommendation 4) would require Altamont to develop site-specific construction plans for all major water bodies proposed to be crossed (see DEIS Table 4C-5). While development of these plans would involve appropriate Federal and state agencies, they will not be available prior to issuance of the FEIS.
SA7-63	See response to Comment SA7-46 above.

SA7-63 (cont.)

equilibrium. This in the past has resulted in channel shifting and damage to downstream property (see page 3C-12). The risk of damage to a pipeline exposed in the riverbed is significant and unacceptable.

The Montana Department of State Lands will require feasibility studies on directional drilling before issuing the right-of-way deeds for the Yellowstone River, as well as for the Missouri River. A description of the open trench method tailored to each river's particular characteristics shall also be submitted. The open trench description shall include depth of trench, width at the top of the trench, method of excavation, projected time for completion, discussion of reclamation, and other pertinent information. The study should include analysis of a crossing realignment slightly downstream to avoid the steep south slope. This information will determine whether the Department will require a specific construction method as a condition of the right-of-way deed.

SA7-64 6-41 No. 68

The Montana SHPO recommends that FERC invite the Advisory Council on Historic Preservation at the earliest possible stage to participate in or comment on the proposed procedures for addressing cultural resource impacts. We strongly encourage inviting the Council's comment, for example, on the management plan to be developed by Altamont to identify, evaluate, and protect National Register eligible properties.

Given the scope of this undertaking and its likely effect on cultural resources, the involvement of the Advisory Council early on in the process could greatly facilitate discussion and decision-making in matters that will eventually require their participation.

SA7-65 6-41 No. 70

In sensitive areas, or anywhere there is likely to be disturbance, additional markers will locate the pipeline. This includes areas such as irrigation projects (center pivot systems require buried pipelines), subdivisions, and areas likely to receive heavy use. In particular, the bench above the east bank of the Missouri is a proposed center pivot irrigation project.

The Montana Department of State Lands will require signs on state tracts where there is not a sign within 1.5 miles. A sign requirement will be placed on the individual right-of-way deeds after a field review has determined where signs would be appropriate.

SA7-64 See response to Comment SA6-2.

SA7-65 Thank you for your recommendation. At a minimum, the DOT regulations at 49 CFR Parts 191 and 192 must be followed. However, we acknowledge the State of Montana's authority to require more stringent standards be applied on state lands.

SA7-66		No. 71	Special precautions in terms of timing or methods of crossing should be considered for the Musselshell River if the northern redbelly dace - five scale dace hybrid (a Montana species of special concern) is found.
SA7-67	B-1-2	III.A.	Topsoil that is less than four inches deep may be difficult for machinery to remove in a separate lift.
SA7-68	B-1-3(A)	2 & 3	Delete #3 and include 'all other improved areas, residential areas, or at the request of the landowner" under #1 to allow the option to use the full work area method in other areas.
SA7-69	B-1-3	D.	Slope breakers should be inclined 5 degrees from perpendicular to slope in order to prevent ponding behind the berm. Berm and cross ditch ends should be staggered so they don't all end in a line downslope. Sand bags should be placed at the ends of the berms. Use polyethylene liner for ditch and upslope side of berm in highly erosive soils, such as the Colorado shale.
SA7-70	B-1-7	V.C.5.	Use agitator in driller to prevent settling out of seeds of differing densities (pers. comm., Westec 1990).
SA7-71	B-1-8	V.D.5.	Using wood chips as mulch would lower the pH of the soil, an effect that may reduce successful revegetation.
SA7-72	B-1-8	VI.E.	Off-road vehicle control will be difficult along most of the pipeline route, as the terrain is basically flat and unforested. Alternative measures should be actively developed now.
SA7-73	B-3-1	A.2.	The elimination of blue grama (*Bouteloua gracilis*) from the mixes is arbitrary. In the Affected Environment discussion (page 3E-25), one of the three mixed-grass prairies is characterized as grama-needlegrass-wheatgrass. This prairie type occurs from Canada to the Yellowstone River, and one of the dominant grasses is blue grama. It withstands grazing and trampling very well, and is adapted to a wide range of soil conditions (written comm. 1991, Montana Natural Heritage Program). It is a warm season, drought tolerant grass; the rest in the mixes are cool season grasses (Long, 1981). In a very hot dry year, blue grama may be the only successful species to revegetate. In this case, it could protect the soil while the cool season grasses overwinter again, and perhaps germinate the following year. This would be preferable to and

SA7-66	Thank you for your recommendation. The staff's Stream and Wetland Construction and Mitigation Procedures (Appendix C-3) require an applicant to apply for state-issued stream crossing permits and obtain a Section 401 water quality certification (or waiver) prior to construction at perennial streams. These Procedures also expressly acknowledge the state's authority to restrict the time window for construction on a site-specific basis.
SA7-67	Comment noted. We have classified soils with less than 4 inches of topsoil as having a "poor" rehabilitation potential. These soils, along with those classified as "poor-to-fair" are considered the most troublesome.
SA7-68	See response to Comment SA7-23 above.
SA7-69	Comment noted. We generally agree with your comments, but do not want to limit the contractor's flexibility by over-specification. As stated in Appendix B-1, our Erosion Control, Revegetation, and Maintenance Plan requires that some judgement be exercised to respond to field conditions.
SA7-70	Comment noted. Appendix B-1 allows for the use of other appropriate measures to prevent seed stratification on a density basis.
SA7-71	Comment noted. Debris is sometimes chipped as a disposal method when a pipeline is routed through forested areas. As a practical matter, less than 1 percent of Altamont's proposed route is forested. Please remember that the plan presented in Appendix B-1 is tailored to address both the Altamont and PGT/PG&E Projects.
SA7-72	Comment noted.
SA7-73	Thank you for this information. Revisions to Altamont's proposed seed mixes were made following consultation with soil conservation authorities throughout the project area at both the state and federal levels. It was the consensus of several BLM and U.S. Soil Conservation Service representatives that blue grama be removed. DEIS recommendation 18 and Appendix B-1 allow for modifications to seed mixes, as deemed appropriate by the landowner or land administering agency.

SA7-73 (cont.) less costly than reseeding the following year because no cool season grasses became established.

SA7-74 B-3-1 A.4. Thickspike wheatgrass (*Agropyron dasystachyum*) and western wheatgrass (*Agropyron smithii*) may both be sod forming (rhizomatous) cool season midgrasses, but the areas they dominate differ significantly (Long, 1981). Thickspike colonizes sandy gravelly dry areas, and is better on slopes than western. Western is successful on medium to clayey soils, better for alluvial clay flats and bottom lands that may dry out slightly saline (pers. comm., 1991, Westec). They do not appear to be interchangeable in habitat, only in morphology. Therefore, their characteristics may be similar, but their ecological value is not.

SA7-74 Comment accepted. See changes to Appendix B-3.

SA7-75 B-3-1 A.6. Potential native *Festuca ovina* alternatives include *F. idahoensis* (the most widespread) and *F. saximontana* (written comm., 1991, Montana Natural Heritage Program).

SA7-75 Thank you for this information.

SA7-76 B-3-1 B.1. FERC recommends removing two of the species most specifically suited to sandy sites. Sand bluestem (*Andropogon hallii*) is good for wind and water erosion and particularly suited to deep sandy soils. It is easy to establish and long lived. Little bluestem (*Schizachrium scoparium*) has different characteristics, being a warm season mid-height bunchgrass (vs. warm tall rhizomatous sod-former of sand bluestem). Little bluestem is good on foothills and loess slopes, a different habitat than deep sandy bottoms (Long, 1981). They are considered "sand-binding" species, seem to be mutually compatible, and beneficial in a wide range of sandy sites. Of the species currently on the sandy soil list (page B-3-3), only Prairie sandreed (*Calamovilfa longifolia*) and Indian ricegrass (*Oryzopsis hymenoides*) are characteristic of sandy sites (written comm., 1991, Montana Natural Heritage Program).

SA7-76 Comment noted. See change in Appendix B-3 and response to Comment SA7-73.

SA7-77 B-3-1 B.3. Of all the grasses of Montana, inland saltgrass (*Distichlis stricta*) is the characteristic saline soil species (written comm., 1991, Montana Natural Heritage Program). Page 3E-28 of the Affected Environment describes saline-alkaline shrubland as characterized by an understory of western wheatgrass and saltgrass. This species is a good one for revegetation. It can grow on soils crusted with salt or very compacted, is a dense sod-former with vigorous rhizomes, and therefore is good for protecting against erosion, especially during early spring flooding. Problems include needing a local seed source, limited sources,

SA7-77 Comment accepted. See change in Appendix B-3.

SA7-77 (cont.) and limited palatability (pers. comm., 1990, Westec). We must not reduce our rangeland to only those species that cattle and sheep like to eat. Of the other species on the saline soil list, only Alkali sacaton (*Sporobolus airoides*) +/- Basin wildrye (*Elymus triticoides*) are characteristic of saline conditions.

SA7-78 B-3-1 B.4. Changes to the clayey site mixture could include eliminating Indian ricegrass (*Oryzopsis hymenoides*) as it is rarely found on such sites.

SA7-79 B-3-1 The changes made to the proposed seed mixes appear arbitrary. The reason for discouraging use of *Bouteloua gracilis* is not given. This is an important native species and should be returned to the seed mixes.

SA7-80 B-3-2 B.5. See discussion above under B.3 for refuting the removal of inland saltgrass. Switchgrass (*Panicum virgatum*) is also a good sod former with good seedling vigor and high yields, especially in sandy soils (Long, 1981). FERC recommends changes without reasons, valid or otherwise, except to reduce the number of species in the mixes, at times removing the most appropriate species. The more variety in the mix, the better the chance something will prosper even in adverse conditions. The fewer species in the mix, the more critical it is to use characteristic indigenous varieties.

SA7-81 B-3-2 B.6. Western wheatgrass (*Agropyron smithii*) has good flood tolerance, spreads rapidly, so seems a reasonable choice for mesic sites. BLM's recommendation to add Streambank wheatgrass (*Agropyron riparium*) is a good one. Meadow foxtail (*Alopecurus pratensis*) is an introduced species and therefore discouraged for revegetation mixes. It is slightly spreading with weak rhizomes, so not an excellent choice anyway. Its benefit is as a pasture species, and would alter range flora specifically for grazing.

Basin wildrye (*Elymus triticoides*) as FERC lists is incorrect. *Elymus triticoides* is beardless (or creeping) wildrye. Basin wildrye (or Great Basin wildrye) (*Elymus cinereus*) is something different (Dorn, 1984). Which does FERC mean? The difference between Great Basin wildrye and Canada wildrye is that Canada is easy to establish, produces ground cover rapidly and is palatable and nutritious. Disadvantages include low competitive success and it's short lived. Basin wildrye is only moderately successful in vigor and establishment, and not good for sandy soils. It

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SA7-78 Thank you for your comment.

SA7-79 Thank you for your comment. Our methodology for recommending changes to Altamont's proposed seed mixes was outlined in response to Comment SA7-73 above.

SA7-80 See response to Comment SA7-77 above.

SA7-81 Comments accepted. See changes to Appendix B-3.

SA7-81 (cont.)			is good in bottomlands, with poor to moderate palatability (Long, 1981).		
SA7-82	B-3-2	B.7	Inland saltgrass (Distichlis spicatum) is extremely appropriate for this mix, and it is not clear why FERC recommended its removal. Please refer to the discussion of this species above in B.3.	SA7-82	Comment accepted. See change to Appendix B-3.
SA7-83	B-3-2	General Comments	Remove Birdsfoot trefoil (Lotus corniculatus), White Dutch clover (Trifolium repens), and strawberry clover (Trifolium fragiferum) from the mixes as they are all introduced species which are degrading the quality of the natural grassland by their rapid spread. Replace, if appropriate, with purple prairie clover (Petalostemum purpurea). If no appropriate legume can be identified, leave forbs out altogether. Remove redtop (Agrostis alba) from acidic mix because it is introduced. Remove meadow foxtail (Alopecurus pratensis) from mesic and acidic site mixes and replace in mesic mix with western and streambank wheatgrass (Agropyron smithii and A. riparium, respectively). Do not add mammoth wildrye (Elymus giganteus) to sandy mix as recommended by the BLM as it is introduced. Use a different, native species of wildrye instead. Do not add Tall wheatgrass (Jose) (Agropyron elongatum) to the saline mix as recommended by BLM, as it is introduced. Remove Sheep fescue (Festuca ovina) from the loamy, clayey, and acidic mixes. Replace if possible with a species listed in A.6.	SA7-83	Comments noted. See changes in Appendix B-3 and response to Comment SA7-73 above.
SA7-84	C-2-2		The Yellowstone River is a Class II fishery, not a Class III fishery (MRIS, 1991). Other data is left out in the fish species present column (see attached). The "Yellowstone River" at MP 268.1 should be "Clark's Fork Yellowstone River". Add mountain whitefish to species codes.	SA7-84	Comment accepted. See changes to Appendix C-2.
SA7-85	C-3-1	C-1	See comment of page 4C-11.	SA7-85	See response to Comment SA7-29 above.
SA7-86	C-3-2	D.3	Should include conservation district-issued stream crossing permits.	SA7-86	The project applicant would be required to apply for all applicable stream crossing permits.
SA7-87	C-3-2		The size of this gravel is critical to the maintenance of equilibrium conditions in the streambed, especially	SA7-87	Thank you for this information.

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SA-28

SA7-87 (cont.) in unstable rivers such as the Yellowstone. It should be matched closely to the adjacent bed surface layer.

SA7-88 C-3-4 Consider removing sod and replacing after construction for extremely sensitive fragile areas.

References

Altamont Gas Transportation Project, 1989. Application for Certificate of Public Convenience and Necessity, Volume IIA, Environmental Report Dec. 1989.

Darling, J., Montana Department of Fish, Wildlife and Parks Billings Regional Office, memo to Patti Groll, MDNRC Feb. 25, 1991.

Dorn, R.D., 1984, Vascular Plants of Montana, Mountain West Publishing, Cheyenne, Wyoming, 276 pp.

Long, S.G., 1981, Characteristics of Plants Used in Western Reclamation, second edition, ERT (Environmental Research and Technology, Inc.), 133 pp.

McFarland, R.C., 1989, Montana Statewide Angling Pressure, Mail Survey 1982-1985, Montana Department of Fish, Wildlife and Parks, Helena, MT, 163 pp.

Montana Natural Heritage Program, written communication January 9, 1991, from Robert DeVelice, Peter Achuff, and Lisa Schassberger to Patti Groll, Montana Department of Natural Resources and Conservation.

MRIS (Montana River Information System), Reach 05 Yellowstone River from the confluence of the Boulder River to the confluence of the Clark's Fork, 1991, Montana State Library, Helena MT.

Westec, personal communication, Duane Knoll, July 1990 and Dean Culwell, December 1990 to Patti Croll, Montana Department of Natural Resources and Conservation.

SA7-88 Thank you for this information. The state is free to require this mitigation at those sites where it determines the technique to be necessary.

RECREATION BASELINE

	Months/ year Boatable	Use Estimate	No. of Developed Sites	Water Character	Angler Use Days[a]	Primary Activity	Secondary Activity
Milk River[1]	1	low	0	flat	137[d]	shore fishing	canoeing tent camping
Missouri River[2]	6	moderate	6[b]	flat	3225[e]	motor boating boat fishing motor trolling viewing	canoeing shore fishing tent camping car camping picnicking
Yellowstone River[3]	9	heavy	3	minor rapids	9,429	motor boating canoeing rafting boat fishing shore fishing car camping driving viewing picnicking	kayaking tubing swimming motor trolling
Rock Creek[4]	0	heavy	4	not boated	5,644	shore fishing driving viewing picnicking	tubing swimming car camping
Clark's Fork[5]	8	moderate/ low	3	minor rapids	2,032	boat fishing shore fishing	motor boating tubing canoeing rafting swimming driving viewing
Bluewater Creek[6]	0	low	1[c]	not boated	743	shore fishing	driving viewing picnicking

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[1] Canada to Fresno Dam
[2] Marias to Chouteau/Blaine County line
[3] Clark's Fork to Stillwater - angler use
Rosebud to Clark's Fork - recreation use
[4] West Fork to mouth
[5] Bridger to mouth
[6] Headwaters to mouth

[a] average of 4 years - 1983-86
[b] Coal Banks Landing recreation are 1 mile above proposed crossing
[c] Bluewater Springs trout hatchery - upstream but fishing may be important
[d] 1982-83 only
[e] Phillips-Fergus-Blaine-Chouteau counties

Additional Angler Use Day Information: Judith River - 2,819 (headwaters to Plum Creek
Ross Fork - 183
Musselshell - 5,194 (headwaters to Lavina)

Sources Montana State-wide Angling Pressure Survey
Montana Rivers Information System

TABLE 4-21

OCCUPANCY RATES - MONTANA TEMPORARY HOUSING UNITS ALONG THE PIPELINE ROUTE

Spread	Type of Housing	No. Contacted	No. Units/Spaces with High/Off Season	Percent Occupancy During High Season	Percent Occupancy During Off Season	No. Units/Spaces Without High/Off Season	Percent Occupancy Without High/Off Season
1	Motel	34	1,179	82%	60%	287	72%
	Mobile Home Parks	12	78	98%	73%	619	91%
	Campgrounds	4	155	99%	6%	0	NA
2	Motel	23	640	78%	45%	44	78%
	Mobile Home Parks	7	0	NA	NA	311	71%
	Campgrounds	6	200	72%	24%	0	NA
3	Motel	37	1,761	86%	49%	30	65%
	Mobile Home Parks	13	0	NA	NA	644	69%
	Campgrounds	4	296	80%	28%	32	40%

Source: Telephone interviews were conducted with owners of motels, hotels, mobile home parks, and campgrounds in October and November, 1989.

TABLE 4-20

ESTIMATED TEMPORARY HOUSING ALONG THE PIPELINE ROUTE - MONTANA

Community	1986 Estimated Population	Motel/Hotel Units	Trailer and Tent Private Spaces	Trailer and Tent Public Spaces	Road Miles From the Route
Spread 1: (MP 0-125)					
Havre	10,840	365	566	35	21
Rudyard	U	9	0	0	15
Hingham	190	0	26	0	9
Chester	1,110	38	35	NA	35
Big Sandy	740	8	10	10	3
Loma	U	4	15	0	27
Fort Benton	1,640	19	45	0	38
Great Falls	57,310	1,558	1,453	22	60
Hilger	U	0	9	0	41
Denton	350	4	2	0	10
Total Spread 1		2,005	2,161	67	
Spread 2: (MP 125-225)					
Stanford	530	12	50	33	19
Hobson	290	0	0	7	4
Lewistown	6,680	279	107	28	26
Moore	220	6	17	0	6
Judith Gap	230	0	2	0	1
Harlowton	1,060	92	26	60	8
White Sulphur Springs	1,310	93	105	4	62
Martinsdale	U	0	35	0	33
Roundup	2,580	52	71	20	68
Big Timber	1,720	59	198	0	56
Total Spread 2		593	611	152	

SA-32

TABLE 4-20 Cont'd

Community	1986 Estimated Population	Motel/Hotel Units	Trailer and Tent Private Spaces	Trailer and Tent Public Spaces	Road Miles From the Route
Spread 3: (MP 225-305)					
Reed Point	U	0	49	0	34
Billings	80,310	2,765	3,159	0	25
Laurel	7,310	52	149	0	9
Columbus	1,590	60	63	0	10
Park City	U	8	10	0	1
Silesia	U	0	22	0	2
Joliet	500	4	25	0	4
Fromberg	630	0	17	0	10
Absarokee	U	4	11	0	32
Roberts	U	0	0	0	19
Bridger	700	NA	29	12	10
Belfry	U	0	0	0	36
Red Lodge	2,050	225	111	81	48
Total Spread 3		3,118	3,057	93	
Montana Total		5,716	6,429	312	

Notes:
1) U = Unincorporated city; population estimate not available.
2) NA = Not available.

Sources:
1) Montana Department of Health and Environmental Sciences, Food and Consumer Safety Bureau, Helena, Montana. December 1988.
2) American Automobile Association, Tour Book. 1989 Edition.
3) American Automobile Association, Camp Book. 1989 Edition.
4) Montana Department of Commerce, Promotion Division, Helena, Montana. 1989.

In addition to motels and campgrounds, there are rental units (apartments, homes, and mobile homes). Rental units probably are more plentiful in the larger cities such as Havre, Lewistown, Billings, and Laurel.

Occupancy rates for temporary housing were estimated through telephone interviews with managers of motels/hotels, mobile home parks, and campgrounds. Most motel managers reported an occupancy rate of 80 to 90 percent during the high season and 40 to 50 percent during the off season (see Table 4-21). Mobile home park managers typically did not report having a high or off season, rather, they have experienced a 70 to 90 percent occupancy rate year-round. Many campground owners reported that they are open only during the summer months and close after Labor Day. During the summer months, occupancy rates for campgrounds were between 70 and 99 percent.

The high season for most motels was reported to be June through August, with a busy peak during the hunting season in October and November. Motels in the community of Red Lodge experience high seasons during summer and again during the winter skiing season. Mobile home parks in northern Montana were nearly 100 percent occupied during the grain harvest season in August and September.

Community services such as ambulance service and fire protection are usually provided by volunteer organizations in the small rural towns and unincorporated cities of Montana. The larger cities offer hospital care, local law enforcement protection, physician services, and other amenities (restaurants, retail outlets, and inside recreation).

4.7.1.2 Wyoming

The arid, intermountain region traversed by the route in Wyoming is similar to Montana with its sparse population and remote urban areas. Cattle ranching, irrigated farming, mining, and the petroleum industry provide most of the employment and income. Greybull, Worland, and Riverton are agricultural and petroleum industry hubs, while Rock Springs, Kemmerer, and Opal in southwestern Wyoming are dominated by oil and gas development. Lander and the South Pass area, adjacent to the Wind River Mountains, are important centers of tourism and recreation.

THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR

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STATE ENGINEER

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February 28, 1991

RECEIVED BY
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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Mr. Laurence J. Sauter, Jr.
Room 7312
Environmental Compliance Branch, OPPR
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, D.C. 20426

Dear Mr. Sauter:

The State Engineer's Office received a copy of the draft Environmental Impact Statement (EIS) for the PGT/PG&E and Altamont Natural Gas Pipeline Projects. The Altamont Pipeline portions (Docket No. CP90-1375-000) were reviewed and I would like to offer the following comments.

SA8-1 Table 1-4, Page 1-23 lists by agency the permits required in Wyoming during the pipeline construction. There are a couple of errors in the listing under the State Engineer's Office (SEO). The SEO is responsible for water administration within the state. The listing under the subheading "Groundwater appropriation permit" is correct. However, the listing under "Surface water appropriation permit" (Consider issuance of a license for encroachment on state highways) appears to be an error. The explanation should refer to the need to obtain a permit from this office should any surface water be used during construction of the pipeline.

The first subheading under SEO, "Oversized and overweight load permit" is also misplaced. The issuance of these permits is not under the jurisdiction of the SEO. Additional information regarding oversized permits can be obtained from Wyoming Ports-of-Entry (777-5288) or the Wyoming Highway Department (777-4375).

If you have any questions regarding these comments, please contact me at your convenience.

Sincerely,

Sue Lowry

Sue Lowry
Interstate Streams Engineer

cc: Rod Miller, State Planning Coordinator's Office

SA8-1 Thank you for your comments. Please see revisions to Table 1-4.

[California Department of Fish and Game]

State of California

Memorandum

To 1. Projects Coordinator
Resources Agency

2. Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Date March 1, 1991

RECEIVED BY
MAR 06 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

From Department of Fish and Game

Subject Pacific Gas Transmission Company/Pacific Gas and Electric Company (PGT/PG&E) and Altamont Natural Gas Pipeline Draft Environmental Impact Statement (EIS) Docket Nos. CP89-460-001 and CP909-1375-000

The California Department of Fish and Game (CDFG) has received the Draft EIS for the proposed PGT/PG&E - Altamont natural gas pipeline projects.

The Draft EIS, prepared by the Federal Energy Regulatory Commission (FERC), the Federal lead agency for the project, concerns the construction of a natural gas pipeline from Canada to southern California. FERC has requested comments to help identify any significant environmental issues or concerns regarding the project.

In 1990 the CDFG prepared and submitted comments on a Draft Environmental Impact Report (EIR) and on the Administrative draft of the Final EIR, prepared by the California Public Utilities Commission (CPUC), the State lead agency for the project. The Final EIR addressed only the California portion of the pipeline. CDFG worked closely with the CPUC and PGT/PG&E pipeline staff during the report's preparation.

SA9-1 FERC states in its Draft EIS that it has incorporated by reference the Final EIR prepared by the CPUC as it relates to the PG&E facilities in California. CDFG has already commented on the preparation of the Final EIR by the CPUC. Attached are the comment letters concerning the project that were sent to the CPUC during preparation of the Final EIR.

Because FERC has incorporated the CPUC's Final EIR into the Federal Draft EIS, our conditions and requirements shall remain the same.

SA9-1 As stated on page 1-14 of the DEIS, the staff does not intend to use this EIS to resurrect old issues which the CPUC has jurisdiction over, nor entertain comments on old issues which appropriately belong before the CPUC. The CDFG's comments were addressed in the CPUC's FEIR and are not being reprinted in this document.

SA-36

Thank you for the opportunity to review and comment on this project. If you have any questions or need additional information, please contact Mr. Joe Vincenty, Associate Wildlife Biologist, California Department of Fish and Game, 1416 Ninth Street, Sacramento, CA 95814 or by telephone at (916) 322-5326.

COPY Original Signed By:
[illegible]
FOR

Pete Bontadelli
Director

Attachment

cc: Mr. Mark C. Kalpin, PGT/PGE Expansion Project -
Washington, D.C.

Mr. Laurence J. Senter, Jr., Altamont Project -
Washington, D.C.

[California Department of Food and Agriculture]

STATE OF CALIFORNIA PETE WILSON, Governor

DEPARTMENT OF FOOD AND AGRICULTURE
1220 N Street, P O. Box 942871
Sacramento, California 94271-0001

March 1, 1991

RECEIVED BY

MAR 0 [illegible] 1991

ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Mr Mark C. Kalpin (PGT/PG&E Expansion Project)
Federal Energy Regulatory Commission
825 North Capitol Street, N E.
Washington, D.C. 20426

Dear Mr Kalpin:

Allow me to introduce myself; my name is David Godfrey. I am a plant certification specialist for the California Department of Food and Agriculture. I am responsible for the administration of 11 clean planting stock programs offered as a service to the agricultural industry of California. In that capacity, it has come to my attention that participants of California's Seed Potato Certification Program may be put at risk in their ability to certify potatoes by the project that will pass through the northwestern portion of Modoc County in the Tulelake area.

The Seed Potato Program certifies potatoes as being grown under requirements set and within the tolerances specified for certain important diseases. One of these diseases is root-knot nematodes (Meloidogyne spp.). In general, nematodes are microscopic, round worms that may be found in the soil, water or plant tissues. There are several types that damage potatoes, but root-knot nematodes have been specifically targeted by certification procedures not only in California, but by certifying agencies throughout North America. Most certification regulations, including California's, have a "zero tolerance" for root-knot nematodes. That means if any (1) plant or tuber is found with visible symptoms, the lot being inspected is rejected.

These worms feed on the plant roots, in some cases causing stunting of the plant and reducing in yields. In addition, feeding produces swellings or galls on the roots. These may also be found on the tubers and reduces the grower's ability to market a crop so affected. State and federal laws set standards (tolerance) for potatoes to be sold on the commercial market. In other words, root-knot nematodes are not only a problem for the seed potato grower, but create a problem to the commercial potato grower as well.

In order to meet seed certification standards and commercial standards, potato growers must plant "clean seed" (certified) on "clean ground" or on parcels of land that have not had crops on them previously, parcels of land which the grower knows the history of and present the least risk of being infested with root-knot nematodes, or parcels that can be treated with chemicals to kill the nematodes. Presently in California there are very few materials that are legal for this purpose and of those available the cost is prohibitive for a potato grower. In addition, the American public is demanding a decrease in the use of pesticides rather than increase, especially in situations where agriculture can use farming and cultural practices that would prevent or limit the spread of pests. That leaves the other two choices and both are dependent on keeping parcels of land free from future contamination by root-knot nematode.

Because of their size, nematodes by themselves cannot move far. They may move two to three feet in moist soil, but usually do not move very far to find a host. Some have been found as deep as six feet and have been known to migrate upward to reinfest soils treated and thought to now be free of the pests. With the help of water, wind, or man, infestations can move rapidly. Movement of contaminated soil on equipment or by equipment (i.e., grading or discing could spread soil-borne pests over a large area rapidly) or by using contaminated surface water are probably the biggest problems in limiting the spread of root-knot nematode. Sanitation measures must be followed if spread is to be limited or prevented. Participants in the California certification program are required to file a notice of sanitation agreeing that they are responsible for all sanitation for the lot entered and that they have carried out all sanitation procedures that a prudent seed potato grower would use to protect the lot.

It appears that one of the projects will eventually be approved. However, it is the concern of current and unrepresented future seed potato growers, as well as commercial potato growers, that they might not be able to meet the requirements or standards to certify seed or to economically grow commercial potatoes. Contamination of parcels by the proposed project(s) through the movement of soil on equipment or by the use of contaminated surface water will occur if precautions are not taken to establish and rigorously follow a sanitation procedure agreed to by growers from the area. Anything less will impact the growers of the area and limit their potential to farm

SA10-1 I have enclosed a copy of California's Regulation for the Certification of Seed Potatoes and excerpts from "The Integrated Pest Management for Potatoes in the Western United States". I have "hi-lighted" those items that are most pertinent to the problem of root-knot nematode. In addition it should be noted that there are other soil-borne pests that can also be moved in a similar manner that affect potatoes and other crops in the area. Should you need additional information, please contact me.

A last comment for you to consider. Last year in the Tulelake area, I had personal experience involving a crew (part of the project) looking for native American sites that would leave me concerned as to whether the project would carry out sanitation agreed to. The crew had agreed to conduct their search, which included digging and moving from site to site, parcel to parcel, in accordance with sanitation procedures lined out by the grower. They were to meet him on a specific date and he would help in the sanitation. In the end, without notifying the grower the crew showed up on an earlier date and was ready to begin

SA10-1 Thank you for the information. In order to conserve space, these technical enclosures have not been reprinted in this volume of the FEIS. They are available for review at FERC.

work without the grower or following any sanitation procedures. While it may have seemed like a little oversight by the crew, it was a mistake on their part that could cost the grower in the end with the potential loss of the ability to farm.

Sincerely,

David Godfrey
Senior Agricultural Biologist
Pest Exclusion/Nursery Programs
Division of Plant Industry
(916) 445-2388

cc: Byrne Bros. Farming

SA-40

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

February 28, 1991

RECEIVED BY
MAR 14 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Mr. Mark C. Kalpin
Federal Energy Regulatory Commission
Environmental Compliance Branch, OPPR
Room 7312
825 North Capitol Street NE
Washington, DC 20426

Dear Mr. Kalpin:

Thank you for the opportunity to comment on the draft environmental impact statement (DEIS) for the PGT/PG&E and Altamont Natural Gas Pipeline Projects. We reviewed the DEIS and have the following comments

SA11-1 1. Two water quality standards modifications will be required for this project. The first modification will be issued for crossings in wetlands areas and streams and stream channels. The second modification will be issued for crossing the Walla Walla River. Procedures described in the DEIS for crossing streams, wetlands, stream channels, and rivers will be required as minimum standards for the issuance of the modification. Site specific requirements in addition to those listed in the DEIS may be required.

SA11-2 2. Water used for hydrotesting is proposed to be discharged into an intermittent creek Water to be discharged cannot exceed the hydrological capacity of the stream channel. The discharge also cannot create turbidity or erosion in the stream channel or downstream.

SA11-3 3 As discussed in Section 3E-2 of the DEIS, wetlands are a valuable natural resource that provide many useful benefits, including wildlife and fisheries habitat, floodwater detention, water quality improvement, and recreational and aesthetic values. Due to the poor record of success in replacing wetlands, we recommend avoiding and minimizing wetland impacts to the fullest extent possible.

SA11-4 4. In order to minimize and rectify impacts to wetlands, the following conditions should be applied: Best Management Practices for sediment and erosion control should be implemented. This should include functional silt fences, immediate revegetation, and mulching. The original contours of the landscape should be restored upon completion of construction. Native vegetation representative of the site should be replanted immediately following re-contouring of the site. Over 80 percent cover of desirable vegetation should be established by September of the following year or revegetation should occur.

[Washington Department of Ecology]

SA11-1 Thank you for this information.

SA11-2 This is an appropriate item for the appropriate state permitting authority to consider when evaluating PGT's application(s) for permission to discharge hydrostatic test water.

SA11-3 Thank you for your comment. The staff concurs with your opinion that wetlands should be avoided to the maximum extent practicable, in light of project-specific considerations and purposes.

SA11-4 The staff's "Stream and Wetland Construction and Mitigation Procedures" establish best management practices for the construction of interstate natural gas pipelines across streams and wetlands.

SA11-5 5. If the project will result in unavoidable wetland impacts, Ecology recommends preparation of a mitigation plan which includes information on: the goals and objectives, construction details (including schedule), the hydrologic regime, revegetation plans, monitoring plan, contingency plans, buffers, the estimated cost, and bonding. The goal of compensatory mitigation should be to replace the wetland functions and values that will be destroyed. In the case of severely degraded wetlands, however, we recommend that improved quality be an objective.

SA11-6 6. Based upon recent findings, Ecology recommends the following acreage replacement ratios as guidance in determining minimum acreage replacement for unavoidable losses:

3.0 : 1 for forested wetlands,
2.0 : 1 for scrub-shrub wetlands,
1 5 : 1 for emergent marsh

(NOTE· These ratios are recommended for calculating the area of wetlands to be created The area should be doubled for enhancement of an existing wetland)

These ratios should be viewed as general guidelines that may be adjusted either upwards or downwards based upon consideration of two factors. 1) the likelihood of successful replacement of lost wetland functions, and 2) the time lag between the loss of wetland functions and their replacement.

7. If an individual section 404 permit (or permits) is required by the Corps of Engineers, Ecology will provide further review at that time.

SA11-7 8 As noted in the DEIS, a water right permit is required for hydrostatic testing Also, water obtained from the City of LaCrosse should not cause the City's total annual or instantaneous use to exceed the amount authorized by existing water rights.

SA11-5 See response to Comment SA11-4.

SA11-6 Thank you for this guidance. The staff believes that Chapter 4E and Appendix C-3 adequately address impact on wetland areas.

SA11-7 Thank you for this information.

Mr. Mark C. Kelpin
February 28, 1991
Page 3

If you have any questions, please call on Comments 1 and 2, please call Ms. Deborah Cornett in our Eastern Regional Office at (509) 456-2877. For questions on Comments 3-7, please call Ms. Ann Ramsberg in our Wetlands Section at (206) 493-9260. For questions on Comment 8, please call Mr. George Farmer in our Eastern Regional Office at (509) 456-6163.

Sincerely,

M. Vernice Santee
Environmental Review Section

MVS:
91-288

cc: Deborah Cornett, ERO
Tad Hamlin, ERO
Ann Remsberg, Wetlands

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

March 5, 1991

RECEIVED BY
MAR 11 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Mr. Mark C. Kalpin
Federal Energy Regulatory Commission
Environmental Compliance Branch, OPPR
825 North Capitol Street NE, Room 7312
Washington, DC 20426

Dear Mr. Kalpin:

We sent you a letter on February 28, 1991, regarding the draft environmental impact statement for the PGT/PG&E and Altamont Natural Gas Pipeline Projects. Since then we have received additional comments from the WA State Dept. of Transportation.

SA11-8 The proposed natural gas pipeline crosses Eastern Washington through portions of WA State Dept. of Transportation's Districts 5 and 6. The project may impact transportation facilities such as state highways, county roadways, railroads, waterways, etc., and would require coordination with and approval and/or permits from the agencies having jurisdiction.

The pipeline appears to cross three State Routes in District 5 (SR-12 and SR-124 in Walla Walla County, and SR-261 in Columbia County), and one State Route in District 6 (SR-26 in Whitman County). Utilities crossing state highways can be by boring only; no open cutting is allowed. Also, a utility permit is required before a utility can be legally cross a state highway. The permit specifies crossing location, permitted use, liability, construction requirements, etc. Application for a utility permit should be made through each district's Utilities Engineer.

Close coordination will also be required with other state, federal, and local agencies, and Indian tribes, having jurisdiction over waters, lands, fisheries, wildlife, etc., that may be impacted by this proposed pipeline.

If you have any questions, please call Mr. Bernie Chaplin, WA State Dept. of Transportation at (206) 753-6005.

Sincerely,

M. Vernice Santee
Environmental Review Section

MVS:91-288
cc: Bernie Chaplin, WSDOT

SA11-8 Thank you for this information.

SA-44

[State of Wyoming (Governor)]

STATE OF WYOMING
OFFICE OF THE GOVERNOR
CHEYENNE 82002

MIKE SULLIVAN
GOVERNOR

RECEIVED BY
MAR 11 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

March 1, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Ms. Cashell:

The Draft Environmental Impact Statement for the PGT/PGE and Altamont Natural Gas Pipeline Projects has been reviewed by the state agencies. Copies of the individual comment letters on the Draft EIS are forwarded herewith for inclusion in the record. I would like to thank you for the opportunity for review and comment by this office and the state agencies.

It is important to first explain the review process that I have established for the review of documents of this nature. The documents are circulated to all state agencies that may have statutory authority over any aspects of the proposed project or that may be impacted by any of the proposed activities. The agencies prepare their review comments and forward them to my office. This allows the comments of all of the agencies to be forwarded as a single submittal to the lead federal agency, which in this case is the Federal Energy Regulatory Commission.

This process also provides the ability to resolve conflicts that may arise between positions or recommendations of state agencies. If conflicting recommendations are submitted, I then review the issues on both sides and establish the official state position.

With all of this having been said, I will note that there are no positions of conflict or apparent conflict between any of the state agency positions. The agency reviews are detailed, thorough and thoughtful. The comments are intended to help develop a complete and accurate Final EIS and, where appropriate, help establish appropriate mitigation measures. I would request your careful review and consideration of these comments.

1890-1990
WYOMING
CENTENNIAL
A LASTING LEGACY

The most sensitive area of the Altamont route in Wyoming is the South Pass area. The Draft EIS and work in the field has paid particular attention to this area. I am personally familiar with this area, having visited the area many times. While not intending to ignore the interest in other sections of the route, considerable state agency attention, as well as mine, has been focused on this area.

I have the following specific comments and recommendations to offer:

1. Comments from the concerned public and state agencies have emphasized the historical and environmental significance of the South Pass area. Construction of the pipeline across this area will have some impact. This impact can be minimized by an effective reclamation and revegetation program. The efforts to accomplish this have been identified by Altamont who also has provided assurances that this will be a priority issue. To ensure that effective reclamation is accomplished, I have the following specific comments:

SA12-1 a. The University of Wyoming has been conducting research on reclamation and revegetation. I would look for Altamont to make available their restoration/revegetation plan to the University for a "peer" review of their plan. The experience of the University will help assure that the most effective reclamation is accomplished.

SA12-2 b. Any reclamation program is only as good as the actual work completed in the field. The Land Quality Division of the Department of Environmental Quality has considerable experience in reclamation practices. I have asked DEQ to periodically inspect the construction, reclamation, and revegetation work when it occurs in the South Pass area. I recognize that this oversight and inspection role will rest primarily with the BLM. Periodic review would be completed in a coordinated manner with the federal agencies but will provide me with assurances that the work is being performed effectively. If questions arise, my office will discuss them with BLM. This assistance would seem to be in the best interest of all parties concerned including the public.

SA12-3 2. Altamont has indicated that representatives of the Northern Arapahoe and Shoshone Tribes will be invited to participate in the cultural surveys. I would encourage the Tribal involvement in this area.

SA12-4 3. It is recognized that there may be some minor deviations in final routing as a result of cultural surveys or field investigations. I encourage BLM to work with state agencies such as the Division of Parks and Cultural Resources and the State Historic Preservation Office during the final efforts in the South Pass area. This would help minimize disruptions and impacts in this area.

SA12-1 Altamont's Construction and Rehabilitation Plan MP 511.0 to MP 540.8 has been included in the FEIS as Appendix B-5.

SA12-2 Thank you for your interest.

SA12-3 As part of our compliance with Section 106 of the National Historic Preservation Act, we would assure that interested Indian Tribes were invited to participate in the surveys. Altamont's cultural resources consultant is currently consulting with the Northern Arapahoe.

SA12-4 As the lead Federal agency with jurisdiction over the undertaking, we anticipate working closely with the appropriate Federal agencies and SHPOs. We agree that cooperation between the BLM and appropriate state agencies should be encouraged.

SA12-5 4. Altamont has indicated that they will take measures to prevent the right-of-way from being used as a roadway. I highly encourage all activities in this direction because uncontrolled vehicle use, especially in the South Pass area, could become a problem.

SA12-6 5. The Wyoming Game and Fish had many comments. Some relate to incorrect or incomplete data. Several comments are items that should be considered for mitigation activities.

SA12-7 6. Right-of-way and access across state trust lands are administered by the Wyoming State Land Office. Altamont is encouraged to contact that office as soon as the detailed rights-of-way are established so that there will be adequate time to consider and process the right-of-way applications.

SA12-8 7. The Public Service Commission has raised comments to issues such as cathodic protection and casing of some crossings. These are public safety issues which need attention.

SA12-9 8. The Altamont project will cause impact on the South Pass area. The impacts on the area would be minimized by utilizing the Route 28 Variation as discussed in the February 25, 1991 letter of the Division of Parks and Cultural Resources. The physical impacts could be significantly, if not fully, mitigated by an aggressive and successful reclamation and revegetation program. The other impacts are not as easily mitigated. This area is a special and unique historical and cultural area. It has been shaped by and maintains the unique cultural history of activities ranging from the earliest use by Native American populations to the significant experience of the westward expansion of the 1800's. Even the mining activities, both past and present, add to the uniqueness of this area. The pipeline will to some degree affect the uniqueness of this special area.

SA12-10 I am unaware of any mitigation which has been proposed to address this impact to the historical and cultural significance of the South Pass area. Mitigation of these impacts is an element that must be considered. I recommend that specific steps be taken to directly mitigate the values being impacted. To offset this impact, I recommend that Altamont be required to provide interpretive services and facilities at an appropriate location or locations to re-emphasize the historical and cultural significance. Appropriate mitigation could be identified through meetings with representatives of Altamont, the Northern Arapahoe and Shoshone Tribes, Fremont County, the Division of Parks & Cultural Resources, the lead federal agency and my office. This certainly could be accomplished in a manner that should not delay the Final EIS. I do believe, however, that this impact is real and that a commitment should be provided by Altamont to pursue this mitigation.

SA12-5 Thank you for your support.

SA12-6 Please see our responses to the Wyoming Department of Environmental Quality comments (SA15-).

SA12-7 We will pass this information on to Altamont.

SA12-8 Please see our responses to the Wyoming Public Service Commission comments (SA20-).

SA12-9 Thank you for your comment. Our DEIS recommendation resulted in Altamont's realignment at this location. (See letter from Wyoming Governor's Office dated March 13, 1991.) We fee confident that Altamont's Construction and Rehabilitation Plan MP 511.0 to MP 540.8, as refined during the BLM's plan of Development process, would result in an aggressive and successful reclamation and revegetation program.

SA12-10 Comment noted. Impact mitigation for features of historical and cultural significance would be developed during the Section 106 compliance process. See new recommendation in Chapter 6.

Again, thank you for the opportunity to comment on this Draft EIS. My staff has worked closely with representatives of Altamont, BLM, your staff, as well as members of the concerned public to identify and review all areas of concern. These comments are offered in the spirit of that cooperative review to ensure that complete information is available upon which to make your final decision. If you have any questions on any of the above comments or enclosed information, please feel free to contact my office.

With best regards, I am

Very truly yours,

Mike Sullivan

MS:aes

Enclosures

cc: ✓Mr. Laurence J. Sauter, Jr., Federal Energy Regulatory Commission
Mr. Jim Roseberry, Bureau of Land Management
State Review Agencies
Wyoming Congressional Delegation
Jerry van der Linden

STATE OF WYOMING
OFFICE OF THE GOVERNOR
CHEYENNE 82002

MIKE SULLIVAN
GOVERNOR

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MAR 18 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

March 13, 1991

Larry Sauter
Federal Energy Regulatory Commission
825 N. Capitol St. NE
Washington, D.C. 20426

Dear Larry:

SA12-11 This letter is to confirm our telephone conversation of today regarding the State of Wyoming's comment letter of March 1 on the Altamont Pipeline EIS. There apparently exists some confusion over item 8 on page three of that letter. The alignment referred to in this paragraph is displayed as map 51 of 59 in the route realignment maps dated October 15, 1990 supplied by Altamont Gas Transmission Company. This alignment should not be confused with the Route 28 Variation displayed as map 14 of 14 in the package of maps accompanying the Draft EIS. I hope that this clarification is helpful.

Sincerely,

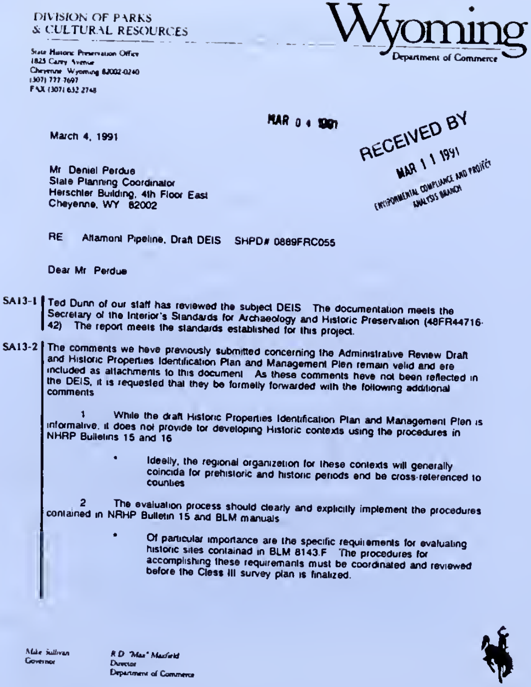
Rod S. Miller

Rod S. Miller
Federal Land Planning Coordinator

cc: John Keck, Wyoming Dept. of Commerce
Jerry van der Linden, Altamont
Jim Roseberry, BLM Worland Dist.
Tom Marceau, SHPO

SA12-11 Thank you for this clarification. Map 51 of 59 presents Altamont's "Continental Divide" realignment, which satisfies our DEIS recommendation 67.

[Wyoming State Historic Preservation Office]



DIVISION OF PARKS
& CULTURAL RESOURCES

State Historic Preservation Office
1825 Carey Avenue
Cheyenne, Wyoming 82002-0240
(307) 777-7697
FAX (307) 632 2748

Wyoming
Department of Commerce

MAR 0 4 1991

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

March 4, 1991

Mr Deniel Perdue
State Planning Coordinator
Herschler Building, 4th Floor East
Cheyenne, WY 82002

RE Altamont Pipeline, Draft DEIS SHPD# 0889FRC055

Dear Mr Perdue

SA13-1 Ted Dunn of our staff has reviewed the subject DEIS The documentation meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation (48FR44716-42) The report meets the standards established for this project.

SA13-2 The comments we have previously submitted concerning the Administrative Review Draft and Historic Properties Identification Plan and Management Plan remain valid and are included as attachments to this document As these comments have not been reflected in the DEIS, it is requested that they be formally forwarded with the following additional comments

1 While the draft Historic Properties Identification Plan and Management Plan is informative, it does not provide tor developing Historic contexts using the procedures in NHRP Bulletins 15 and 16

- Ideally, the regional organization for these contexts will generally coincide for prehistoric and historic periods and be cross-referenced to counties

2 The evaluation process should clearly and explicitly implement the procedures contained in NRHP Bulletin 15 and BLM manuals

- Of particular importance are the specific requirements for evaluating historic sites contained in BLM 8143.F The procedures for accomplishing these requiremants must be coordinated and reviewed before the Class III survey plan is finalized.

Mike Sullivan
Governor

R D "Max" Maxfield
Director
Department of Commerce

SA13-1 Thank you for your comment.

SA13-2 Thank you for these comments On March 11, 1991, we forwarded a revised Pre-Inventory Report and Historic Properties Identification Plan and Management Plan to your office for review and comment. If your comments have not been adequately addressed in the revised Plan, the comment period for the document will allow for integration of any further concerns that you might have.

SA13-3 3. If delays, disputes and disagreements on evaluations are to be reduced, wherever possible, planning must be early, detailed and above all, coordinated. To that end, participation in development of the CRMP must include joint, detailed planning and coordination meetings until the CRMP is approved. The preliminary meeting should precede the 1991 "field session" and include the following

- Review and comments on draft historic contexts,
- Review of the Class I inventory, and
- Review of comments on the Draft CRMP

Please refer to SHPD project control number #0889FRC055 on any future correspondence dealing with this project. If you have any questions, contact Ted Dunn at 777-6694

Sincerely,

Thomas E Marceau

Thomas E. Marceau
Deputy SHPD

FOR
Dave Kathka, Ph.D.
State Historic Preservation Officer

TEM:TJD:rw

Copies: John Keck
FERC
BLM WY

SA13-3 The need for a meeting will be evaluated when all parties have had an opportunity to review the revised Plan.

Department of Commerce
WYOMING

January 25, 1991

Ms. Laurie Baros
Staff Archaeologist
FERC
825 North Capital Street, N.E.
Washington, D.C.   20426

RE: Altamont Pipeline, SHPO #0889FRC055

Dear Ms. Baros

Fred Chapman of our staff has reviewed the subject "Historic Properties Identification Plan and Management Plan" for the proposed Altamont pipeline project. We would like to offer the following comments concerning the CRMP.

SA13-4 1. On page 5, the acronym for the National Historic Preservation Act is incorrectly identified as "NRHP". "NRHP" refers to the National Register of Historic Places. The correct acronym is "NHPA".

2. On page 94, the CRMP states that "Where more construction area is needed, a wider inventory corridor will be surveyed." We recommend that FERC insure that an additional "buffer" zone of at least 100' is surveyed around all ancillary facility construction areas and equipment staging areas. It is our experience that doing so reduces the likelihood of accidental site encroachment by construction operators.

3 On page 96, the CRMP states that "All testing will be conducted after oral or written consultation with appropriate federal and state agencies." We prefer that limited evaluative testing be conducted by the archeological contractor during Class III survey field operations. Agency consultation should occur when the proposed level of testing effort exceeds the excavation of a few test units. We want to avoid situations where intensive testing becomes a substitute for mitigative excavation.

4. On pp. 101-102, the text states that construction will be suspended in response to the discovery of historic properties during construction activities. 36CFR800.2(e) defines an historic property as any site "...included in, or eligible for inclusion in, the National Register." We feel that construction should be suspended until all cultural resources identified during construction operations can be properly evaluated for the National Register.

SA13-4 See response to SA13-2.

Mike Sullivan
Governor

R.D. "Max" Maxfield
Director, Department
of Commerce

STATE HISTORIC PRESERVATION OFFICE

1825 Carey Avenue
Cheyenne, Wyoming 82002-0240
(307) 777-7697
FAX (307) 632-2748

Laurie Baros
Thomas E. Marceau
January 25, 1991
Page 2

SA13-4 (cont.)

5 On page 104, the CRMP identifies several Class III survey exceptions. One of the exceptions involves "areas without legal access". We assume this includes landowner denial situations. We do not believe that landowner denial necessarily relieves FERC from its Section 106 responsibilities. Every effort should be made to insure access for cultural resource fieldwork.

6 We strongly recommend that the following provision be added to item #8, page 107: "Pursuant to 36CFR800.3(c), FERC will not issue any license or permit for the undertaking until the Section 106 compliance process is completed."

If you have any questions, please contact Fred Chapman at (307) 777-6530.

Please refer to SHPO project control number #0889FRC055 on any future correspondence dealing with this project. If you have any questions contact Mr. Chapman at 777-6530.

Sincerely,

Thomas E. Marceau
Deputy SHPO

FOR.
Dave Kathka, Ph.D.
State Historic Preservation Officer

TEM.FRC.kim

DIVISION OF PARKS
& CULTURAL RESOURCES

Third Floor
Barrett Building
2301 Central Avenue
Cheyenne, Wyoming 82002
(307) 777-7013
FAX (307) 777-6005

David Kathka, Ph.D.
Director

Wyoming
Department of Commerce

[Wyoming Division of Parks]

FEB 2 6 1991

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MAR 1 1 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

February 25, 1991

Dan Perdue
State Planning Coordinator
Herschler Building, 4th Floor East
Cheyenne, Wy. 82002

Dear ~~Mr. Perdue:~~ Dan

I have reviewed the Altamont Pipeline, Draft EIS, and have the following comments to offer. The concerns raised in the memorandum sent to Rod Miller, dated December 12, 1991 still exist. The discussion of the alternatives does not allow for a clear reading of the problems and benefits associated with each option. In view of these perceived problems I offer these thoughts.

SA14-1 1. The lack of supporting documentation on cost estimates for the proposed routes inhibits the ability to clearly understand the difficulties associated with the various routes selected for consideration. It would be beneficial to provide the state actual cost data and analysis of costs for each option. This would provide a better understanding of proposed routes

SA14-2 2. The proposed route through the South Pass Area will serve to disturb the historical integrity if completed as planned. Much of the area is in pristine condition, highly sensitive to use or development. Selection of another route would be the optimum manner to preserve and protect the South Pass Area. Given cost factors and other considerations, I would recommend that at a minimum, the project through the South Pass area utilize the Route 28 Variation. This would bring the corridor closer to South Pass, but in an already disturbed area. The historical integrity of this corridor is lost, while the preferred route is still in a relatively pristine conditions.

SA14-3 I further recommend that the State of Wyoming should have primary input in selection of the basic trail corridor through the area to assure minimum disruption of the remaining visual characteristics of the area. The project would have prime authority regarding selection of the corridor based on engineering constraints. The state's role would be to assure adequate protection and consideration for the resources in the area.

Mike Sullivan
Governor

R.D. "Max" Maxfield
Director
Department of Commerce

SA14-1 Additional cost information has been included in the FEIS. Please see revised Table 2-10.

SA14-2 We assume that the intent of this comment is to support the use of Altamont's proposed "Continental Divide" realignment over the route originally proposed (as referenced in the letter from the Wyoming Governor's Office dated March 13, 1991). As discussed in the DEIS, the Route 28 Variation would not mitigate the impact of the project through the South Pass area, as it rejoins the proposed route near MP 529. The DEIS conclusions regarding use of the Route 28 Variation have been retained in the FEIS.

SA14-3 Comment noted. Altamont has indicated its willingness to cooperate with the State of Wyoming.

SA14-4 Consistent with this concern, I would advocate location of the pipeline on the northern portion of Highway 28, along the Route 28 Variation. Location of the pipeline in this area would serve to further negate visual impacts to the historic trail corridor. Extreme care must be taken in areas which directly impact the Oregon Trail.

SA14-5 3. As recommended by the State Historic Preservation Office, I would also support the development of historical contexts for the area impacted by pipeline construction. The development of historical context will benefit the assessment of historic trail impacts and provide a vehicle for future project analysis in the area.

SA14-6 4. Regardless of the route selected, it is imperative that every effort be made to restore the pipeline route to its original condition. Any disturbance must be minimized to retain as much of the natural character of the route selected as possible.

If you have any questions regarding this document, please feel free to call me at 777-6318.

Sincerely,

John T Keck

John T. Keck
Management Officer

SA14-4 See response to Comment SA14-2 above. The proposed route is on the northern side of Highway 28 between approximate MPs 529 and 538.5.

SA14-5 On March 11, 1991, we forwarded a revised Pre-Inventory Report and Historic Properties Identification Plan and Management Plan to the SHPO and other appropriate agencies for review and comment. If not already addressed in this revised Plan, the comment period for this document will allow for integration of any further concerns expressed by the SHPO.

SA14-6 We agree that disturbance should be minimized. Please see Altamont's proposed Construction and Rehabilitation Plan MP 511.0 to MP 540.8, reprinted as Appendix B-5 in the FEIS. Also see related discussions in FEIS Chapters 4B and 4L.

THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR

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Department of Environmental Quality

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MAR 11 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

MEMORANDUM

TO: Alen Edwards, SPC

FROM: Dennis Hemmer, DEQ

DATE: February 15, 1991

SUBJECT: Comments on the Altamont Pipeline Draft EIS

Bill DiRienzo of the Water Quality Division reviewed the document and provided the following comments. These comments address only the water quality implications of the project.

SA15-1 Overall, we believe that the water quality impacts have been addressed rather well in the DEIS and that the combination of permitting requirements and mitigative procedures will effectively reduce adverse water quality impacts to insignificant levels in most instances.

We do, however, have a concern over the crossings of Rock Creek and Willow Creek in Fremont County. These two streams are known to contain mercury as acknowledged on page 4C-4 of the DEIS. The potential exists for the resuspension of mercury into the water column as a result of construction activities. This mercury could then be introduced into the food chain or otherwise impact downstream beneficial uses of the water.

FERC "recommends" in the draft that the applicants conduct sediment testing at the crossing sites and submit the results to FERC, COE and DEQ. This testing should probably be done at this stage in project development and the results of the testing published in the Final EIS. If the study shows that mercury exists or can potentially be released in toxic amounts, appropriate mitigation should also be included.

It seems that Altamont believes that the regulatory process will effectively protect water quality if elevated levels of mercury are found in the sediments. In a way, this is true. A finding of mercury in toxic amounts in the sediments would preclude the use of Nationwide Permit (12) and an individual 404 permit would be required. Under this scenario, when the time comes to construct the stream crossing we would require that the applicant develop a pollution control plan which would maintain concentrations in the water to less than 0.144

[Wyoming Department of Environmental Quality]

SA15-1 Thank you for this information. We agree with your analysis of the issue, and believe that our recommended mitigation would ensure that the issue is resolved during the Section 401 and 404 permitting process.

SA15-1 (cont.)

micrograms/L which is the current standard applied to all Class II streams. If Altamont cannot come up with a way to achieve this, we could not certify the construction and the 404 permit could not be issued. Water quality would be protected, however, I doubt that this would be acceptable to the applicant.

Since it is ultimately Altamont's responsibility to develop the mitigation plan and demonstrate compliance with the state water quality standards, it is better that they do it now rather than later and risk the chance of construction being suspended.

It may be prudent to require that the crossings of these segments are done totally "in the dry" as is prescribed for the crossings of significant coldwater and warmwater fisheries. This method would greatly reduce the risk of discharging sediment during construction. It is still uncertain whether even this will eliminate the risk of exceeding the standard for mercury and it requires further investigation and discussion.

Thank you for the opportunity to comment.

[Wyoming Game and Fish Department]

WYOMING
GAME AND FISH DEPARTMENT
[illegible] [illegible]

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MAR 11 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

February 20, 1991

EIS 5751
Federal Energy Regulatory
Commission
PGT/PG&E and Altamont Natural
Gas Pipeline Projects
Draft Environmental Assessment
Lincoln County

Rod S. Miller
Federal Lands Planning Coordinator
State Planning Coordinator's Office
Herschler Building, 4th Floor East
Cheyenne, WY 82002

Dear Mr. Miller:

The staff of the Wyoming Game and Fish Department has reviewed the Draft Environmental Impact Statement for the PGT/PG&E and Altamont Natural Gas Pipeline Projects. We offer the following comments for your consideration.

Terrestrial Considerations:

Altamont proposes to construct, own, and operate a 30-inch diameter interstate natural gas pipeline transmission system with design capacity to transport 719 MMcf/d of natural gas. The pipeline would extend for 620 miles from the Canada-U.S. border near Wild Horse, Montana, to the southwest corner of Wyoming near Opal.

SA16-1 AFFECTED ENVIRONMENT

Distribution and habitat information provided for wildlife along the Altamont route are quite general, with no specifics on the relative importance of the areas to be crossed to the associated wildlife populations. The DEIS does not differentiate between yearlong ranges and crucial big game winter ranges. Lumping these habitats into a single category of "important range" is nice, but impacts to some seasonal ranges are important, while impacts to others are not.

SA16-1 This information is identified and differentiated in DEIS Tables 3E-7 and 4E-14.

SA16-2 The DEIS disregards the forage and cover values of upland shrubs such as sagebrush, bitterbrush, greasewood, rabbitbrush, and saltbush. These values were attributed only to riparian shrub habitats (Page 4E- 62). The document defines impacts to biological resources as long term if the resource does not recover from the impact within three years (Page 4E-1) Upland shrubs treated with brush beaters would probably recover within three years, but any shrubs removed by blading or trenching will not recover within three years. These losses should be considered long term in the DEIS.

SA16-3 Impacts were defined as significant if any one of four criteria were met. One of the criteria was temporary loss of habitat that may result in increased mortality or lowered reproductive success (4E-2). Since upland shrubs will be impacted by this project, and many of those provide important forage and cover for many wildlife species, these long-term impacts will have some degree of significance. How much crucial habitat for big game will be impacted? All impacts to upland game and big game habitat were considered insignificant. This is reflected in the zero acreage figures in Tables 5-3 and 6-3. There is zero impact only after crucial habitat is restored. While impacts may not be significant, they are not nonexistent.

SA16-4 Another problem with the DEIS is the lack of distinction between crucial habitat and other habitat types. The only place crucial habitat is mentioned is under the species discussions in the Impact and Mitigation Measures section on page 4E-62 and 4E-64. All maps, tables and discussion should include crucial habitat, not just winter range.

Wildlife information provided for the South Pass Variations is even less complete than that for the preferred route.

Page 3E-36, 37

SA16-5 The DEIS states that the Jeffrey City Variation "would not affect any federally listed, proposed, or candidate species". That is not really true. Given the nature of raptor nests and the low priority assigned to searching for new nests, it is likely that nests of candidate species, like ferruginous and Swainson's hawks, could be affected by this project.

SA16-6 The Jeffrey City Variation would cross nesting/brooding complexes associated with at least six sage grouse leks (MP 514-517, 518-519, 527-531, 539-540, 547-551, 554-557) for a total of approximately 15 miles of crucial habitat. Four of these complexes would also be affected by the Alkali Butte or Northern Utilities routes. Construction in these areas should be done during daylight hours, in as short a time as possible, with minimal destruction of sagebrush.

One sage grouse lek immediately adjacent to the Pioneer/Exxon right-of-way in SW1/4 SE1/4 Sec. 29, T26N, R95W, would apparently be destroyed by the proposed Stratton Lakes Compressor Station.

SA16-2 While these losses may be "long-term", they were determined to be not significant because the amount of sagebrush-steppe habitat disturbed would be minimal when compared to the amount of forging habitat available.

SA16-3 See response to Comment SA16-2 above.

SA16-4 See response to Comment SA16-1 above.

SA16-5 Comment noted. See our revised Chapter 3E.

SA16-6 Comment noted. Thank you for this information.

Environmental Consequences

SA16-7 The DEIS incorrectly concludes that impacts to important wildlife species and habitats along these alternative routes would not be significant. These conclusions are based on impacts on an entire species, rather than populations. We manage populations and expect impacts to be evaluated on a population basis. For big game, this would be the various herd units. The DEIS should provide these evaluations.

CONCLUSIONS AND RECOMMENDATIONS

SA16-8 Data presented in the DEIS cannot be used to compare wildlife impacts of the route variations. Each alternative needs to be subjected to the same scrutiny as the proposed action. Such items as acres of crucial big game habitat and numbers and locations of raptor nests impacted need to be evaluated for each alternative, and mitigation measures, where necessary, need to be discussed. The zeros in Tables 5-3 and 6-3 are of no use for this comparison. It appears the various alternative routes were proposed primarily to address cultural/historical concerns. Several wildlife species of concern were ignored in the variations, and possible impacts were not discussed. While these might not be significant, they should be discussed in detail.
SA16-9 Impacts to riparian areas were not identified and itemized for each variation as they were for the proposed action. These omissions prevent proper consideration of the alternatives.

SA16-10 Proposed mitigation measures are inadequate. The DEIS concludes there will be no significant impact to big game or upland game bird habitat, so there is no mitigation for crucial habitat losses. In addition, there is no mention of seasonal restrictions for construction activities to protect wintering big game during severe winters.

SA16-11 In Fremont County, the Alkali Butte variation will have the least impact to wildlife habitat. However, each variation needs to be compared from Lost Cabin to Opal to determine the route variation with the least impact to wildlife.

SA16-12 Compressor #7 on the South Pass variation is too close in proximity to crucial elk winter range. It may cause these elk to displace to less suitable habitat. We suggest an alternate site be chosen.

Specific Errors Noted in the DEIS

SA16-13 Page 3E-25, 26: Terrestrial wildlife species lists for each habitat type would be preferable to naming only a few of the most common animals.

SA16-7 Thank you for your comment. We have identified and evaluated impact on important big game range in terms of impact on populations, as indicated in the significance criteria presented on DEIS page 4E-2. Because no factual information has been provided to support this comment's broad statement of significant impacts, we stand by our original conclusions.

SA16-8 We disagree. We believe that the information and data presented in the EIS is more than adequate for a comparison of environmental impact associated with the five routes reviewed between the Lost Cabin and Opal areas. Within the limits of the data available during our analysis, all of the routes were subjected to the same level of scrutiny.

SA16-9 Wetland and riparian areas associated with each variation are presented on Altamont Maps 9-14 in the Map Volume and were totalled for comparison in DEIS Tables S-4 and 6-3. Additional material has been included in FEIS Chapters 3E and 4E.

SA16-10 We disagree that our recommended mitigation is inadequate to address the proposed action. However, we will be happy to consider mitigation proposed by the State of Wyoming in future analyses. See response to Comment SA16-12 below.

SA16-11 The EIS compares each of the variations to the proposed route between Lost Cabin and Opal.

SA16-12 Comment accepted. See new recommendation in Chapter 6

SA16-13 We disagree. The CEQ's regulations implementing NEPA discourage Federal agencies from using an encyclopedic approach in the preparation of EIS's. Rather, they stress the need to focus on identifiable impacts and issues of concern.

SA16-14	Page 3E-26: Sagebrush-Steppe Section, the first paragraph states that this vegetation type is bounded on the west by Douglas fir forest. It should say lodgepole pine, Douglas fir and Englemann spruce forest.	SA16-14	Comment accepted. See change in Chapter 3E.
SA16-15	Page 3E-34: The mule deer discussion does not mention the crucial winter range crossed by the proposed pipeline route in the Hall Creek Herd Unit (approximately from MP492.5 to MP505). White-tailed deer should also be included on this page. This species occurs along all major river systems intersected by the Altamont right-of-way.	SA16-15	Comment accepted. See change to DEIS Table 3E-7.
SA16-16	Page 4E-6: This section makes no mention of effects of the pipeline on sagebrush habitats. This impact should be addressed and mitigated in the final EIS.	SA16-16	This issue is discussed on DEIS page 4E-58.
SA16-17	Page 4E-58: While totel sagebrush losses may be insignificant on a statewide basis, local impacts may be very significant. We strongly recommend impact be minimized and sagebrush be replaced, especially on crucial winter ranges.	SA16-17	See response to Comment SA16-2 above.
SA16-18	Table 3E-7: Does not differentiate between crucial habitat and other habitat types. Milepost date will need to be corrected to account for errors on the project maps. "Leking range" should be "sage grouse nesting habitat."	SA16-18	We believe that the categories presented in DEIS Table 3E-7 are adequate to identify and evaluate potential impact on important game species.
	Map Corrections		
SA16-19	There is no differentiation between winter/yearlong and crucial winter/yearlong range for mule deer and antelope on this map or anywhere else in the DEIS. This Department places much higher emphasis on mainteining and protecting crucial winter ranges. We usually request much more stringant mitigation of impacts on crucial big game ranges because of their importance and the small amount of total habitat they constitute. The mule deer winter range from MP429 to 432 is winter/yearlong range. Deer winter ranges between MP440-442 and MP450-451 are crucial/winter yearlong ranges. Pronghorn winter range from MP434-442 is crucial winter/yearlong range. Pronghorn crucial winter range occurs between MP454-455 and between MP458-459. Remaining pronghorn ranges within this segment of pipeline should be changed to winter/yearlong range. Specific Comments: Altamont-Proposed Route (Map 7 of 14): Moose winter range idantified for the area between MP503 and MP511 is restricted only to the riparian shrub habitat crossed on Twin Creek, Stambaugh Creek, Chalk Springs, Beaver Creek and Little Beaver Creek, and should be identified as crucial winter range. Only the area between MP508 and MP511 is moose winter range. Moose winter range between MP524.5 to MP527 is crucial winter/yearlong range restricted only to the riparian shrub habitat crossed on Fish Creek and the Sweetwater River.	SA16-19	The EIS maps were prepared utilizing the best information available to us at the time of printing. The maps are not being reprinted and reissued with the FEIS; additional information received since publication of the DEIS will be reflected in the text of the FEIS.

SA16-19 (cont.)

Elk winter range between MP503.5 and MP506.5 is not accurate. Elk winter range should be shown from MP498 to MP499 and MP500 to MP505 with elk severe winter relief range between MP499 and MP500.

Tha proposed pipeline route will pass through the center of three sage grouse strutting grounds, yet no upland game bird nesting habitat (UGB) areas are identified on the map. UGB areas should be identified from MP483 to MP486, from MP486 to MP489, from MP491 to MP495, from MP497.5 to MP501.5, from MP522 to MP526, and from MP526 to MP528.

Altamont-Jeffrey City Variation (Map 9 of 14): The map does not identify the UGB area between MP484 and MP487.

Altamont-Alkeli Butte Variation (Map 12 of 14): The map does not identify the UGB areas between MP490 and MP495, and between MP500 and MP503.

Altamont-Route 28 Variation (Map 14 of 14): Moose crucial winter/yearlong range in the upper Twin Creek basin from MP507 to MP509 is not identified on the map. The moose winter range identified between Pine Creek and Fog Gulch should be restricted only to the riparian shrub habitat on Pine Creek. The moose habitat on Pine Creek should be identified as crucial winter/yearlong habitat.

Altamont-proposed route: There is crucial antelope winter range between MP552 and 556, MP561 and 571, approximately MP614 to MP615.

Altamont-South Pass variations: There is crucial mule deer winter range between (approximately) MP570 and 585.

Altamont-proposed route (Map 6 of 14): There is a sage grouse lek at MP427. The grouse lek at MP429 is accurate. The map shows a grouse lek at MP434: our records do not show a lek at this location.

The following sage grouse lek sites and associated nesting areas were also not identified in the DEIS and should be included:

Proposed Route Sage Grouse Leks

WSW	Sec.	7	T42N	R108W	SE	Sec.	1	T26N	R104W
NE		4	T24N	R108W	SW		11	T26N	R104W
Center		8	T25N	R107W	NE		15	T26N	R104W
SW		7	T24N	R109W	NW		16	T26N	R104W
SE		13	T24N	$109W	SENW		17	T26N	R104W
SW		16	T26N	R103W	SE		34	T26N	R104W

SA16-19 (cont.)

South Pass Variation Sage Grouse Leks

NW	Sec. 31	T23N	R102W		SW	Sec. 35	T23N	R104W
N	21	T21N	R106W		SW	14	T20N	R108W

SA16-20 The statement that most sage grouse nesting is completed by June (4E-64) is incorrect. Wing data suggests hatching peaks the second week of June.

NONGAME BIRDS

SA16-21 Because of the small scale of the maps, we did not attempt to determine conflicts with known raptor nests. On pp. 4E-62 and 6-31, FERC requires the company to conduct raptor surveys prior to construction, realign the route to avoid destruction of active nests, and not construct within 0.5 mi. of an active raptor nest during raptor breeding and nesting season. Taking of any nests, including inactive nests, requires a Federal permit.

Threatened and endangered candidate species are listed in Tables 3E-5 and 4E-11 and discussed on page 4E-62. There are some errors:

SA16-22 1. The long-billed curlew was not included. This is a candidate species. Curlews nest throughout Wyoming, but the Altamont route does not pass through any known concentrations.

SA16-23 2. The whooping crane summers in Wyoming, but not along the proposed route.

SA16-24 3. There was an active bald eagle nest in 1990 near the pipeline route where it passes the north end of Seedskadee National Wildlife Refuge. This pair may return and nest in the same location or nearby. Seedskadee NWR personnel and our nongame bird biologist should be contacted prior to construction in case these birds nest again.

SA16-25 4. Mountain plovers nest throughout Wyoming, not just in southern Wyoming.

SA16-26 5. These two tables and pp. 4E-61 through 4E-62 discuss "SpecialStatus Wildlife Species". A reference is made earlier in the DEIS to a 1977 WGFD publication (presumably the Current Status and Inventory of Wildlife in Wyoming). This is outdated; the Nongame Bird and Mammal Strategic Plan (1987) is the appropriate source for a list of species of concern. The following bird species, in addition to those already mentioned, may occur along the pipeline route:

a. white pelican - forages in many of the larger streams, including the Green River;

SA16-20 Comment accepted. See change to Chapter 4E.

SA16-21 Thank you for this information.

SA16-22 Because long-billed curlews do not occur in the vicinity of the Altamont Project, they are not included in DEIS Tables 3E-5 and 4E-11.

SA16-23 Thank you for this information. See revised Chapter 4E.

SA16-24 See response to previous comment.

SA16-25 Comment accepted. See change to Chapter 3E.

SA16-26 Comment accepted. See new material added to Chapter 4E.

SA16-26 (cont.)

b. black-crowned night-heron - nests near Farson and forages in irrigated meadows and wetlands;

c. snowy egret - same as night-heron;

d. white-faced ibis - same as night-heron;

e. trumpeter swan - wintered in 1990-1991 along Green River by the pipeline crossing;

f. merlin - the pipeline crosses crucial nesting habitat for this species along the Green River. We should be contacted prior to the company's raptor surveys because we may have already surveyed that area for merlins. No trees with magpie nests should be cut along the Green River and tree-cutting should be avoided as much as possible;

g. great blue heron - the known colony near the route is in NESE Sec. 25, T21N, R114W.

SA16-27 6. The peregrine falcon is not a winter migrant. This species nests in northwestern Wyoming and may occur on suitable cliffs elsewhere. They also migrate through the state in spring and fall.

Any net loss of wetland habitat should be mitigated.

NONGAME MAMMALS

SA16-28

Page 3E-30,31: The list of threatened and endangered species for Wyoming should include the spotted bat.

Page 4E-53,61: For completeness, these sections should include the spotted bat and Preble's shrew (Federal).

General Comment

SA16-29

We request that FERC or its agent provide the Wyoming Game and Fish Department with a map showing prairie dog towns identified on this project. Maps of 1:24,000 or 1:100,000 scale would be acceptable.

As stated previously, the 1977 Game and Fish Department publication Current Status and Inventory of Wildlife in Wyoming is outdated. The 1987 Nongame Bird and Mammal Strategic Plan and the 1991 Wyoming Mammal Atlas (draft) are the appropriate current sources.

SA16-27 See response to Comment SA16-23 above.

SA16-28 These species were not included on the species list obtained from the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act. Therefore, they have not been included in the EIS.

SA16-29 We will pass this request along to the project applicant.

Aquatic Considerations:

SA16-30 Page 2-5, par. 1: The description of trenching across flowing streams gives no indication of how fish passage will be provided. Providing fish passage at all times during instream construction in streams containing game fish is a standard requirement of most Army Corps of Engineers 404 permits and is a concern of ours. We recommend that such a provision be included if such is not the present case.

SA16-31 Although this section states that stream banks will be "restored to approximate pre-construction contours," it makes no mention of specific measures to return stream banks to pre-construction bank stability (or better). This concern was identified in our previous comments and is necessary to maintain stream channel stability. We recommend that disturbed stream banks be stabilized with either large angular riprap (average diameter in one direction greater than twelve inches) or that wire enclosed riprap structures be used.

SA16-32 Page 3C-14, Sweetwater River: The second paragraph of this section states that this river has a Type III state fishery classification. This comment is correct; however, it is somewhat confusing to the reader. All of the other classifications listed on this page are in reference to water quality as defined by the Wyoming Department of Environmental Quality, whereas the fishery classification for the Sweetwater is defined by the Wyoming Game and Fish Department. Since a later section of the DEIS describes the fishery classification of all potentially affected waters, we recommend that the classification for the Sweetwater be changed to the DEQ classification of Class II.

SA16-33 Page 3C-14, Green River: Under normal operating conditions, Fontenelle Reservoir effectively removes most of the factors listed in this discussion that can degrade water quality. At these times, this part of the Green River contains relatively high quality water. We recommend that this section be modified to reflect this fact.

SA16-34 Page 3F-11, Green River: The statement that "No critical fish habitat exists in the vicinity of the crossing site" is incorrect. This part of the river is used extensively by Kokanee salmon as a major spawning area which contributes to the recruitment of this species in Flaming Gorge Reservoir. A major Kokanee migration run occurs here annually in October and November and special efforts should be observed to avoid negative impacts associated with the project. Significant spawning activity by rainbow and brown trout also occurs in this part of the river.

SA16-30 Thank you for your comment. Our Stream and Wetland Construction and Mitigation Procedures (Appendix C-3) require the applicant to adhere to the conditions attached to the Section 404 permit.

SA16-31 This issue is addressed in DEIS Chapter 4C and Appendix C-3.

SA16-32 Comment noted. See change to Chapter 3C.

SA16-33 Comment noted. See revised Chapter 3C.

SA16-34 Comment noted. See revised Chapter 3C.

SA16-35 Page 4F-9, Bighorn River: In addition to the fishery impacts that could occur at the crossing site, impacts could also occur in upstream portions of the river. The river in the area of Thermopolis is classified as a Class 1 trout stream by our Department (important trout stream of national importance). If releases from Boysen Reservoir are cut back to facilitate trenching across the river, significant fishery impacts could occur - especially in the Class 1 portion of the river. Our primary concern is that reservoir releases during the non-irrigation season be maintained at a relatively constant flow of 900 cfs to ensure maintenance of brown trout spawning and incubation habitat. We strongly recommend that the applicant coordinate closely with our department regarding stream flow alterations that could be caused by the project.

SA16-36 Page 4F-9, Green River: We concur with the fishery assessment contained in this section and strongly recommend that the applicant work closely with our agency to minimize impacts to this important fishery. Serious consideration should be given to boring underneath the stream channel, especially if the crossing would otherwise occur between October 1 and May 1.

SA16-37 Page 6-29, Mitigation Measures: This section makes no mention of specific measures to return stream banks to pre-construction levels of stability (as mentioned above under Page 2-5, par. 1). We recommend that FERC consider adding this mitigation measure.

Thank you for the opportunity to comment on this project.

Sincerely,

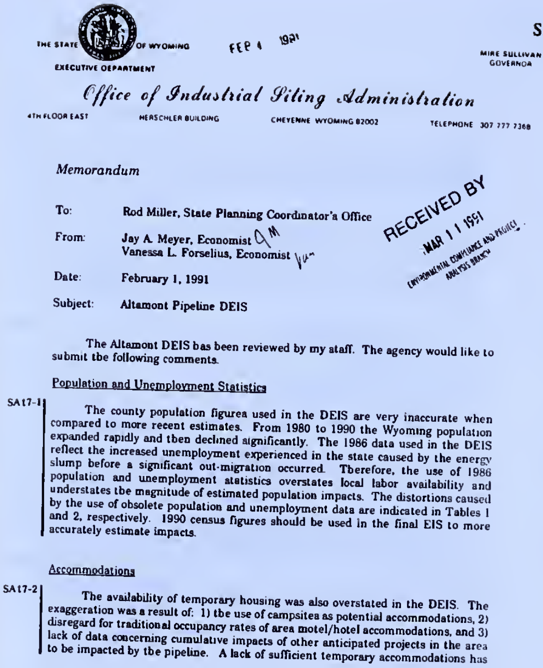
JOE WHITE
DEPUTY DIRECTOR

JW:TC:cdl
cc: Game Division
Fish Division
HATS Division
USF&WS

SA16-35 We are unaware of any proposal to decrease instream flows from the Boysen Reservoir.

SA16-36 Thank you for your comment.

SA16-37 See response to Comment SA16-31 above.



SA-66

THE STATE OF WYOMING
EXECUTIVE DEPARTMENT

MIKE SULLIVAN
GOVERNOR

Office of Industrial Siting Administration

4TH FLOOR EAST HERSCHLER BUILDING CHEYENNE WYOMING 82002 TELEPHONE 307 777 7368

FEB 4 1991

Memorandum

To: Rod Miller, State Planning Coordinator's Office

From: Jay A. Meyer, Economist JM
Vanessa L. Forselius, Economist

Date: February 1, 1991

Subject: Altamont Pipeline DEIS

RECEIVED BY
MAR 11 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

The Altamont DEIS has been reviewed by my staff. The agency would like to submit the following comments.

Population and Unemployment Statistics

SA17-1 The county population figures used in the DEIS are very inaccurate when compared to more recent estimates. From 1980 to 1990 the Wyoming population expanded rapidly and then declined significantly. The 1986 data used in the DEIS reflect the increased unemployment experienced in the state caused by the energy slump before a significant out-migration occurred. Therefore, the use of 1986 population and unemployment statistics overstates local labor availability and understates the magnitude of estimated population impacts. The distortions caused by the use of obsolete population and unemployment data are indicated in Tables 1 and 2, respectively. 1990 census figures should be used in the final EIS to more accurately estimate impacts.

Accommodations

SA17-2 The availability of temporary housing was also overstated in the DEIS. The exaggeration was a result of: 1) the use of campsites as potential accommodations, 2) disregard for traditional occupancy rates of area motel/hotel accommodations, and 3) lack of data concerning cumulative impacts of other anticipated projects in the area to be impacted by the pipeline. A lack of sufficient temporary accommodations has

[Wyoming Industrial Siting Administration]

SA17-1 The source of the data include in DEIS Table 3G-4, U.S. Bureau of Census (1988), was the latest comprehensive data set available to us at the time the DEIS was written. Thank you for providing more recent data on the population and unemployment in Wyoming. However, as you can see below, inserting this more recent data into our analysis does not change the results. The estimated increases in population for each pipeline spread would still be under the 10 percent threshold of significance.

Spread	County	Population	Nonlocals	% Increase
4	Big Horn	10,525		
	Washakie	8,388		
	Hot Springs	4,809		
	Spread 4 Total	23,722	538	2.27
5	Fremont	33,662		
	Spread 5 Total	33,662	532	1.60
6	Fremont	33,662		
	Sublette	4,843		
	Sweetwater	38,823		
	Lincoln	12,625		
	Spread 6 Total	89,953	538	0.60

SA17-2 We address the availability of temporary housing in our revised Chapter 4G "Assumptions and Limitations". We acknowledge that at times the demand for temporary housing may exceed the supply and that this could result in the displacement of some tourists while benefiting the proprietors of the local motels and RV camps. However, this is not expected to be a significant impact since the opportunity for this conflict to occur in a specific area would exist for one summer season only.

SA17-2 (cont.) traditionally encouraged construction workers to use recreational campsites. Significant use of campgrounds by construction workers during the tourist season may adversely impact local tourism business in specific areas.

The DEIS does not consider historical hotel/motel vacancy rates in those cities and counties to be impacted by the project. Construction will occur during the tourist season. Using the assumptions presented in the DEIS, it is estimated that about 170-175 hotel/motel rooms will be needed in each spread. This represents 27% of the available rooms in Spread 4 (an area with low vacancy rates during summer months)

SA17-3 Several major construction projects are planned within the areas to be impacted by the Altamont project. A new heap-leach gold mine is planned for development in Montana northwest of Cody, Wyoming. Louisiana Land and Exploration anticipates development of a gas processing plant near Shoshoni, Wyoming. Expansions are planned or under way at three trona operations near Green River, Wyoming. These projects are expected to bring in workers who will compete with the Altamont workers for available temporary accommodations. It is possible that temporary housing vacancy rates in Spread 4 could fall below 5%. The final EIS should include mitigation measures which would be implemented if this threshold is reached.

Table 1, Wyoming County Population

County	1980	1986	1990*
Big Horn	11,896	11,310	10,525
Fremont	38,992	36,026	33,662
Hot Springs	5,710	5,967	4,809
Lincoln	12,177	18,121	12,625
Park	21,639	23,237	23,178
Sublette	4,548	7,246	4,843
Sweetwater	41,723	44,467	38,823
Uinta	13,021	21,560	18,705
Washakie	9,496	10,226	8,388
Totals	159,202	178,160	155,558

Source: Wyo. Department of Administration, Research and Statistics

SA17-3 Thank you for your comment. In the future, we will be happy to consider any mitigation measures which the State of Wyoming feels are appropriate.

Table 2, Wyoming County Unemployment Rates

County	1986	1987	1988	1989	1990*
Big Horn	12.7	11.2	7.9	7.0	8.6
Fremont	11.9	10.6	8.3	8.4	6.8
Hot Springs	8.3	7.8	8.3	4.6	3.7
Lincoln	6.7	11.9	8.7	8.3	6.8
Park	8.4	7.4	8.6	6.6	4.7
Sublette	7.3	12.2	7.6	6.6	3.7
Sweetwater	9.7	11.1	8.1	6.2	6.7
Uinta	12.6	12.1	6.6	6.3	6.2
Washakie	9.6	9.6	6.7	6.4	6.0
Average	10.1	10.4	7.4	6.7	6.8

*January through November average.

THE GEOLOGICAL SURVEY OF WYOMING
BOX 3008 UNIVERSITY STATION • LARAMIE WYOMING 82071
(307) 766-2286

STATE GEOLOGIST AND DIRECTOR - Gary B. Glass

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January 30, 1991

-- MEMORANDUM --

TO: Wyoming Clearing House

FROM: Gary B. Glass, State Geologist

SUBJECT: PGT/PG&E and Altamont natural gas pipeline projects
Draft Environmental Impact Statement (DEIS)

SA18-1 We have reviewed the DEIS on the Altamont natural gas pipeline and only have a few comments. In the discussions of the Jeffrey City and Alkali Butte variations (pages 3A - 23), we note an error in regard to the Granite Mountain Fault System. There is evidence of Quaternary activity on this fault. Scarps related to this fault system are 22 - 86 feet high, and there are indications of multiple events. In addition, the maximum credible earthquake for the system is magnitude 6.75 with a recurrence interval of 2,000 - 6,000 years. We have attached some materials that provide references for our comments.

SA18-2 If the pipeline is built through the South Pass area, it may cross a number of mining claims for precious metals. Presumably the pipeline company is aware of these mining claims.

GBG:sb

Attachments

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SA18-1 Thank you for this new information. Please see revisions to Chapter 3A. In order to save printing space, the reference material is not being reprinted in the FEIS. It is available for review at FERC.

SA18-2 Thank you for you comment. See Chapter 4A.

SA-70

[Wyoming State Land/Farm Loan]

WYOMING STATE LAND OFFICE

Wyoming State Land
and Farm Loan Office

122 WEST 25TH STREET HERSCHLER BUILDING
CHEYENNE, WYOMING 82002-0600
PHONE 307/777-7331

HOWARD M SCHRINAR COMMISSIONER 777-6629
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SHARON S GARLAND ASSISTANT COMMISSIONER 777-6629
ACCOUNTING & ADMINISTRATION
DAVE W FORCE ASSISTANT COMMISSIONER 777-6638
FARM LOANS & SURFACE LEASING
DON L COLLAMORE ASSISTANT COMMISSIONER 777-7309
GOVERNMENT GRANTS & LOANS
HAROLD O KEMP ASSISTANT COMMISSIONER 777-6643
MINERAL LEASING & ROYALTY COMPLIANCE

MEMORANDUM

TO: Rod Miller, State Planning Coordinator's Office

FROM: Paul Cleary, Deputy Commissioner PC

DATE: February 21, 1991

SUBJECT: PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft EIS

SA19-1 Table 1-4 of the subject document accurately portrays the potential role of this office in the proposed Altamont pipeline project. We are prepared to work with the project proponents whenever they are ready to apply for a right-of-way for the pipeline where it crosses Wyoming state trust land parcels, or where they need temporary use permits for project construction activities located on state lands outside the pipeline right-of-way. Please let us know if we can be of further assistance.

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SA19-1 Thank you for your comment. We will pass this information along to the applicant.

[Wyoming Public Service Commission]

THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR

Public Service Commission

700 W 21ST STREET
(307) 777 7427
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MEMORANDUM

TO: MR. ROD MILLER, FEDERAL LANDS COORDINATOR,
STATE PLANNING COORDINATOR'S OFFICE

FROM: JON JACQUOT, CHIEF ENGINEER,
PUBLIC SERVICE COMMISSION

DATE: FEBRUARY 19, 1991

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE ALTAMONT
GAS TRANSPORTATION PROJECT, STATE IDENTIFIER 89-084

Thank you for the opportunity to comment on this matter. Our comments are as follows:

SA20-1 1. Pipeline Safety matters inadequatey covered. The Draft Environmental Impact Statement should address the legal safety requirements of the U.S. Department of Transportation (DOT) found at 49 CFR Parts 191 and 192. SA20-2 The Draft Statement wrongly states that all gathering facilities are subject to these standards. (See page 4K-1.) It should state that transmission and non-rural gathering are covered. SA20-3 We question why six inch or larger diameter pipe is addressed when thirty inch diameter pipe is being used. (See page 2-6.)

SA20-4 The document should describe how Altamont intends to comply with the safety standards. It should state the grade of pipe to be used in each "class" location ("class" as defined by DOT safety standards), describe the various location "classes" and state in detail where they are found along the proposed route or routes.

SA20-1 Thank you for your comments. As stated in Chapter 3K, both projects would be designed, constructed, operated, and maintained in accordance with the DOT's regulations at 49 CFR Parts 190, 191, and 192.

SA20-2 Comment accepted. See change to Chapter 4K.

SA20-3 Section 2.2 of Chapter 2 describes general construction procedures common to all pipelines discussed in the EIS. The intent of the referenced paragraph is to identify that DOT regulations require radiographic inspection of all welds on 6-inch diameter pipe or larger. This statement is relevant both to Altamont's proposed 30-inch diameter pipeline and PGT's proposed 42-inch diameter pipeline.

SA20-4 A discussion of the class location concept ("class" as defined by the DOT regulations) is presented in DEIS Chapter 3D. All 620 miles of Altamont's proposed pipeline would be located in what the DOT regulations define as a class 1 area. The pipe grade and wall thickness ultimately selected would be required to comply with DOT regulations. We feel that inclusion of pipe grades in an EIS is neither essential nor meaningful information to the vast majority of the intended audience, unless a specific issue requires the presentation of this data as part of the analysis. No such issue is apparent here.

The Statement should also give details of:

SA20-5	(a) the type of joint coating to be used on mill wrapped pipe (see page 2-7);	SA20-5	Altamont proposes to apply an external coating of fusion-bonded epoxy at the joint.
SA20-6	(b) why Altamont chose to cathodically protect pipe with sacrificial anodes rather than rectifiers (see page 2-7);	SA20-6	Comment noted. See change to Chapter 2. Altamont has not yet chosen its cathodic protection system. The referenced citation occurs in Section 2.2 of Chapter 2, which contains a description of general construction, operation, and maintenance procedure common to all pipelines discussed in the EIS. Altamont would design its cathodic protection system on the basis of a pipe-to-soil potential survey, and other factors, following construction. Pipeline corrosion protection would meet requirements of DOT's regulations, 49 CFR 192, Subpart I.
SA20-7	(c) whether or not the valves in the pipeline will allow internal inspection devices to pass through and if not, why not (see page 2-9);	SA20-7	Altamont's valves would allow the passage of internal inspection devices.
SA20-8	(d) the proposed frequency and type of leak survey (see page 2-9) and pipe-to-soil voltage checks (see pages 2-10) to be conducted;	SA20-8	Pipeline inspections are addressed in DEIS Chapter 3K. Altamont would conduct aerial patrols once a month and surface patrols annually or more frequently if necessary where aerial patrols cannot be observed properly.
SA20-9	(e) what emergency shut down procedures are proposed (see chapter 2); and	SA20-9	Establishment of emergency plans is addressed in DEIS Chapter 3K. Altamont's emergency plan would meet minimum standards established under DOT's regulations.
SA20-10	(f) what test pressure(s) will be established for the line (see page 2-56).	SA20-10	Pipeline testing requirements are addressed in DEIS Chapter 3K. Altamont's pipeline would be tested to meet the minimum requirements established under the DOT's regulations. Altamont's maximum operating pressure would be 1,440 psig.
SA20-11	We believe that it is not the applicant's intent to cathodically protect the pipeline with sacrificial anodes as noted above. We believe that it is preferable and more economical to protect the pipeline with rectifier units fed from utility electrical lines along the pipeline. Further, we believe that the casing of crossings should be avoided to enhance safety. (See page 2-5.) The use of casing will increase the chance of corrosion and be a detriment to the physical integrity of the pipeline.	SA20-11	Thank you for your comments. Some of the "other factors" referenced in response to Comment SA20-6 above refers to the availability of electric lines along the proposed route, as well as the cost of constructing new lines where none presently exist and the visual impact implications of constructing new lines.
SA20-12	2. Coordination with other utilities should be addressed. The Statement should describe in detail any crossings by the line of the facilities of existing utilities or other pipelines and should describe where the line (along its primary route or any alternate routes) may come into close proximity with other utility or and pipeline facilities. Altamont should present a detailed plan for coordinating with the owners and operators of these facilities to avoid contact with and damage to them. Interruptions in vital utility services to the public should be avoided, and this subject is not adequately addressed.	SA20-12	The pipeline would be constructed in accordance with all DOT safety regulations. The construction contractor would be provided with a list of jurisdictional authorities and would notify appropriate authorities in writing at least 48 hours prior to commencement of pipeline construction, in order that the authorities may appoint inspectors to ensure that crossings at roads, railways, drainage ditches, rivers, or other utilities, etc., are constructed in a satisfactory manner.
SA20-13	3. Potential landslide problems. The Draft Statement says that future studies of potential landslide areas should be performed. Pipelines should avoid landslide areas in considera-	SA20-13	Comment noted. Please see our revision of DEIS recommendation 45.

SA20-13 (cont.) tion of the safety, reliably and cost (both to construct end maintain) the line. If the proposed route of the pipeline encounters landslide areas, it should be modified to avoid them.

SA20-14 4. Proposed burial of power lines. The Draft Statement proposes the use of buried power lines to provide electrical power to the pipeline's compressor stations. Such lines generally cost more than overhead lines end ere generally not as reliable. The Public Service Commission has teken the position that persons causing the excess installetion and maintenence cost of underground power lines should be the ones to bear those costs. (See page 4L-3.)

SA20-15 5. Future participation by the Wyoming Public Service Commission. The entire role of the Wyoming Public Service Commission should be better described in Table 1-4 of the Stetement. This should include recognition of our DOT Pipeline Safety inspection responsibilities, the EIS review assistance routinely given to the Governor's Office and our continuing review of the activities of the pipeline (before and after it is built) to protect the Wyoming public in state and federal arenas.

SA20-16 6. Pipeline operational standards as barrier to use by Wyoming Gas. In Chapter 5, the Statement should address the physicel ability of Wyoming producers and shippers to use the line. The relatively high operating pressure of the Altamont line (1,440 lbs. per square inch as opposed to 800 to 1,000 lbs. per squere inch for most other lines going through Wyoming) will require Wyoming producers and shippers to use extra compression to overcome the high operating pressure. (See page 5-3.)

SA20-17 7. Miscellaneous Metters.

(a) Chapter 2, including Table 2-14, addresses other projects to move gas to California markets. No mention is mede of the TransColorado Pipeline which is considered by its owners to be a means by which gas can be moved to California.

SA20-18 (b) Page 2-1 states that land owners should be responsible for erecting fencing to protect their property. It is customary in the industry for the pipeline operator to erect fencing at the land owner's request.

SA20-19 (c) Page 2-6 states that pipe strings will be lowered into the trench simultaneously. Actually, they are lowered one at a

SA20-14 Thank you for your comment. Chapter 4L discusses two options for mitigating the visual impact of supplying electrical power to permanent aboveground facilities.

SA20-15 Thank you for your comment. In the future, we will be happy to present any permit, approval, or consultation requirements relative to the Public Service Commission which the State of Wyoming feels are appropriate to include in this table.

SA20-16 This comment correctly identifies that parties wishing to inject gas into the proposed pipeline would be required to overcome the operating pressure at the injection point. The higher system operating pressure of Altamont's proposed pipeline would result in lower pressure losses and a more efficient overall system. We are unaware of any Altamont operational standards which represent barriers to the transportation of Wyoming gas.

SA20-17 The TransColorado proposal is independent from both of the proposed projects, and is presently undergoing environmental review under the leadership of the BLM. Given that TransColorado could deliver gas to either El Paso, Transwestern, or both, it is unclear exactly what markets TransColorado would serve. TransColorado's filing identifies that gas shipped by its proposed pipeline could be ultimately redelivered to the Southwest, the Midwest or California markets. Further, TransColorado's proposed facilities would allow gas to be transported in either direction (e.g., from the Colorado western slope southward or from the San Juan Basin northward). As an open-access transporter, the final destination of gas transported by TransColorado would be determined by the shippers who utilize the pipeline.

SA20-18 Landowners would be informed of necessary fence openings before construction. The applicant would adequately brace fences before any openings were made, and access and livestock controls would be employed for as long as the fence opening was needed during construction. The applicant would then restore all fences opened for construction purposes to their original condition when activities in the area are completed.

SA20-19 Once the pipe strings are welded together, the welds would be inspected and field coated. Segments of the intact pipeline would then be lowered into the trench. Please see Figure 2-1 for a pictorial representation of this process.

SA20-19 (cont.) time beginning at one end of a string and proceeding to the other end, except for river crossings at which simultaneous lowering of a string is used.

SA20-20 (d) The "Northern Utilities" should be referred to as the "Northern" or "Northern Gas" alternative because Northern Gas Company now owns a line in the pertinent alignment. (See page 2-51 and others.)

SA20-21 (e) Reference on page 3H-4 to "Stillwater County, Wyoming" should be changed to "Sweetwater County."

SA20-22 We feel that these deletions are serious and must be addressed in the Final Environmental Impact Statement. If you should have any questions regarding this matter, please let me know.

SA20-20 Comment noted. A name change for one of the alternative routes at this stage in the process would only serve to confuse the public.

SA20-21 Comment accepted. See change to Chapter 3H.

SA20-22 Thank you for your comments.

[University of California/Cooperative Extension]

UNIVERSITY OF CALIFORNIA
TULELAKE FIELD STATION

DIVISION OF AGRICULTURE AND NATURAL RESOURCES   COOPERATIVE EXTENSION SERVICE

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TULELAKE, CA 96134
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March 8, 1991

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MAR 14 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street N. E.
Washington, D. C. 20426

Re: Docket Nos. CP89-460-001
CP90-1375-000

Dear Ms. Cashell,

SA21-1 The purpose of this letter is to provide input into the draft EIS for the PGT/PG&E Pipeline Expansion Project. I am a University of California Farm Advisor and Superintendent of the University of California Tulelake Field Station. My duties include field research and grower education, with primary emphasis on crop pest management. My main concern with the pipeline development is the potential introduction and dissemination of serious soil born pests and diseases to Tulelake area fields.

There are numerous pest and disease that cause legitimate concern. I would like to comment on a few of these that I believe pose the most serious treat to profitable crop production in this area. All of these organisms can potentially be introduced into fields through contaminated soil on equipment or by the use of contaminated fill.

Columbia Root-knot nematode (*Meloidogyne chitwoodi*) is a serious pest of fresh market and seed potatoes. Columbia root-knot nematode causes a tuber blemish that makes affected tubers unmarketable in fresh market channels; thus; it is capable of causing severe economic damage at very low soil population levels. Because of the seriousness of this pest, there is a zero tolerance for this nematode in fields used for production of certified seed potatoes. Control of Columbia root-knot with nematicides is expensive and only partially effective under Tulelake conditions. The introduction of this pest to nematode free fields would lead to greatly increased costs of production for potato crops and would eliminate the field for future production of certified potato seed.

UNIVERSITY OF CALIFORNIA   U S DEPARTMENT OF AGRICULTURE   MODOC / SISKIYOU COUNTIES COOPERATING

SA21-1 Thank you for this information. No response required.

SA-76

Two other root Knot nematodes are of economic importance in this area, the Northern Root-knot nematode (*Meloidogyna hapla*) and the Barley Root-knot nematode (*Meloidogyna nassi*). The northern root-knot can cause economic damage in alfalfa, sugarbeets and in potatoes, while the barley root-knot is a serious pest of small cereal grains.

Another type of nematode, stubby root nematode (*Trichodorus spp*) is also a potentially serious pest of potatoes. This nematode is a vector of tobacco rattle virus that causes an internal defect of potatoes referred to as corky ringspot. Uncontrolled, this problem can render potatoes unsalable. The resent suspensions of Temik and Telone nematicide registrations will make it very difficult to control Tobacco rattle virus and stubby root nematode once they are introduced into a field.

Sugar Beets are presently being introduced into to the Tulelake production area. This new crop is a very viable commodity for local production and should lend economic stability to family farm operations currently besieged by very low grain prices or at the mercy of volatile potato and hay markets. Despite its great distance from sugar refineries, the Tulelake area currently has a competitive advantage because the area is free of the serious soil born pests and diseases that plague other sugarbeet production areas in the state. The introduction of Rhyzomania disease or of sugarbeet cyst nematode into the area, will cause a loss of sugerbeet acreage and may push production costs above the potential gross profit for this contracted commodity.

Local growers now do all that they can to prevent spread of serious soil born pests and diseases onto their farms. High pressure wash racks are located around the area so that growers may wash off equipment being moved between fields. A local committee of growers and sugarbeet processors has proposed strong language for current sugarbeet contracts to avoid introduction of pests and diseases to our virgin sugarbeet soils. See California Beet Growers Association letter enclosed.

In the construction of the pipeline across agricultural land, extreme care must be taken not to undo the diligence of growers in keeping their fields free of crop threatening problems. The introduction of disease or pest laden soil will at the very least increase costs of crop production and may severely limit the choice of crops that can be grown on an infested property. With volatile commodity markets, the ability of producers to alter crop choices may largely determine the economic sustainability of the farm.

As a minimum precaution all equipment used in the construction of the pipeline should be cleaned and sanitized before it is brought into the area. Further all equipment should be cleaned and sanitized prior to moving from one field to another. Such cleaning should consist of a thorough high pressure wash followed by an equally thorough steam cleaning. All soil used as fill should come from non agricultural sites and should be certified as being free of serious agricultural pests. Failing this all fill soil and all areas effected by vehicle travel should be treated with an effective soil fumigant. Only very expensive, plastic tarpped methyl bromide applications are likely to provide sufficient control of each of the organisms discussed above.

A great amount of information is available on the damage potential of the above named problems and on the difficulty and expense of controlling these problems once they are established. Please feel free to contact my office if you have questions or need further documentation on the harm to be caused by spreading these problems to uninfested fields.

Sincerely,

Harry L. Carlson
Superintendent/Farm Advisor

HLC/gq

cc: Mark C. Kalpin
Laurence J. Santer, Jr.

Enclosure: 1

IDAHO FISH & GAME
600 South Walnut / Box 25
Boise Idaho 83707

February 19, 1991

91 FEB 25 AM 9: 06
SECRETARY

CP89-460-000, 001

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Ms. Cashell:

The Idaho Department of Fish and Game (Department) has several concerns regarding the Draft Environmental Impact Statement (DEIS) for the PGT/PG&E natural gas pipeline project.

SA22-1 1. One of the big impacts to the fishing public will be that the noise, construction activity and muddy water will likely force anglers to curtail or cancel fishing trips during the construction process. This was not mentioned in the section on impacts (4C-13).

SA22-2 2. Even with the best sedimentation controls, the river will be muddied during the trenching and laying of pipe. The river will also receive sediment from construction activity on the banks, particularly during rain storms and rain-on-snow events. Sediments will move downstream, making it difficult for fish to feed and fill interstitial spaces required for good benthic invertebrate life. Impacts of this nature will last beyond the construction period. Again, this impact was not addressed. Can estimates be given for the amount of sediment that will be added to the river?

SA22-3 3. One of our biggest concerns is that this document hardly mentions mitigation proposals. Section 4F-5 mentions only that mitigation and monitoring plans, which take into account impacts to water quality and fisheries, will be sent to the secretary of the Commission prior to construction. Our Department would like to have the mitigation plans included in the DEIS for agency and public review.

Mitigation measures for Idaho are specified in 4C-13, 4C-15, 6-26 and 6-32. Most of the activities in these sections are sensible construction activities, but do little or nothing to actually offset damages that were done to a public resource. We ask that mitigation measures being considered by Geomax Consulting be reviewed by us and included in the DEIS.

Cecil D Andrus / Governor
Jerry M Conley / Director

SA22-1 Chapter 4C addresses impacts to hydrology and water quality. Impacts on recreational interests were addressed in the Draft EIS on page 4D-6.

SA22-2 The staff believes that these issues were adequately addressed in the Draft EIS on pages 4C-2 through 4C-4, and 4F-2 through 4F-5.

SA22-3 Please see Appendix C-3 of the Final EIS for the FERC staff's "Stream and Wetland Construction and Mitigation Procedures", and Appendix F in the Final EIS for PGT's proposed "Moyie River Pipeline Crossings: Construction, Mitigation, Restoration Plan"

SA22-4 4. FERC has asked for comments on the Camp Nine alternative route for Loop 1, which reduces the number of crossings of the Moyie River. An alternate route would be less damaging to fisheries, but would require an additional corridor. From a wildlife point of view, it would be better to use the existing right-of-way, rather than create a new corridor that may have as many or more impacts than the existing route. The choice between routes may depend upon specific mitigation measures proposed by PGT/PG&E. If mitigation measures in the Moyie River result in a net improvement in fish habitat, then this may be the preferred route. Thus, it is important that the fishery mitigation plan be reviewed as part of the DEIS and not delayed until the final EIS.

SA22-5 5. One of our other big concerns involves the timing of construction activities in and around waterways. The only mention of timing was in the Appendix (Section 3-C-1). We would ask FERC to restrict construction in Idaho waterways to the period between July 1 and September 30.

SA22-6 6. An additional mitigation measure should be added on either page 6-32 or 6-33. The timing of construction on Loop 1 should be done to avoid disturbing wintering big game for the three-month period from mid-December to mid-March. Winter construction activities would be more appropriate for Loop 2.

SA22-7 7. There are no mountain quail in northern Idaho. Delete this paragraph on page 4E-23.

SA22-8 8. There are some obvious spelling errors. Kootenai is spelled wrong three times in Table 3E-3; Cocolalla is spelled wrong twice in Table 3E-4; and Coeur d'Alene is spelled wrong in Table 3G-2.

In summary, our agency finds this document incomplete. We particularly ask that mitigation measures be specified in the DEIS. Thank you for the opportunity to comment.

Sincerely,

Jerry M. Conley
Director

JMC:DWO:MAM:PLH:tlv

cc: Bureau of Fisheries
Bureau of Wildlife
Bureau of Program Coordination
Region 1

SA22-4 Thank you for your comment. Please see revised Chapter 6.

SA22-5 Section I.C.1. of Appendix C-3 allows appropriate state permitting agencies to either expand or restrict, on a site-specific basis, the FERC staff's recommended time window for construction of June 1 through September 30.

SA22-6 PGT currently does not propose to construct Loop 1 during the winter months. See revised Table 2-8.

SA22-7 Thank you for your comment. See revised Chapter 4E.

SA22-8 Thank you for your observations. See appropriate revisions.

Local Agency Comments

LOCAL AGENCIES

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[Boundary County Noxious Weed, Bonners Ferry, Idaho]

Boundary County Noxious Weed Control
Box 267
Bonners Ferry, Idaho 83805

February 14, 1991

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FEB 20 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington DC 20426

RE: Docket No. CP89-460-001
Docket No. CP90-1375-000

Dear Ms. Cashell:

Boundary County has an ongoing State mandated noxious weed control program that we have been implementing for the past twenty (20) years. During the past few years we have noticed the rapid spread of several species of noxious weeds on existing PGT rights of way, especially Spotted Knapweed.

LA1-1 It is a proven fact that construction contractors, as well as PGT maintenance workers, unknowingly are spreading these plant parts on their equipment. This being the case, we are very concerned that the contractors on this upcoming project will be bringing contaminated equipment into Boundary County, particularly, if it has been in an infested area previouly, such as the loop 2 area in Rathdrum that is infested with leafy spurge, and the loop 3 area that is infested with Rush Skeletonweed. There is also considerable Common Tansy and Spotted Knapweed in the proposed construction area which we do not want spread further.

LA1-2 Since PGT did not address noxious weed control in its rehabilitation plan, we request that PGT submit a noxious weed plan which includes the use of herbicides where necessary. Herbicide use could be spot treatments or broadcast, prior to, and during construction.

PGT should also not rule out the use of herbicides as part of its right of way maintenance plan. The central maintenance yard in Samuels should be evidence enough of the result of no herbicide use on the right of way. The result is a solid stand of Spotted Knapweed from the county road to the maintenance yard.

LA1-1 Thank you for this information.

LA1-2 The staff has recommended that PGT develop and implement, in consultation with the appropriate federal, state, and local agencies, a plan for the control of noxious weeds. See Chapter 4B and 6.

LA1-2 (cont.) Whatever area is chosen to store equipment for this project, such as a main storage yard, should be weed free, also, or treated prior to use to avoid contamination of equipment.

Finally, it should also be required that all seed and mulch used to re-vegetate disturbed sites be certified to be noxious weed free; and that these sites should be monitored for three (3) years afterward for Noxioua Weed activity.

Sincerely,

/S/ Phil Allegretti

Phil Allegretti
Noxious Weed Superintendent
Boundary County, Idaho

cc: Mr. Mark C. Kalpin
(PGT/PG&E Expansion Project)
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Mr. Laurence J. Sauter, Jr.
(Altamont Project)
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
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SHERMAN COUNTY

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ESTABLISHED
FEBRUARY 25, 1889

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565 3572
GERALD LOHREY
SHERIFF
565 3622
LLOYD GOSSON
ROAD SUPERVISOR
565 3271
[illegible] STREET

OFFICE OF THE SECRETARY
91 FEB 26 AM 9:00

[Sherman County, Moro, Oregon]

February 15, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street N.E.
Washington, DC 20426

Re: Docket No. CP89-460-001
Pacific Gas Transmission Company
PGT-PG&E Pipeline Expansion

Dear Ms. Cashell:

Last year, the Commissioners of Sherman County approved resolution number 8-06-90 (attached), in support of the PGT-PG&E Pipeline Expansion Project. At this time, during the public comment period for the Federal Energy Regulatory Commission's draft Environmental Impact Statement, we want to reaffirm to you our support of this project.

LA2-1 On behalf of the citizens of Sherman County, we urge your rapid completion of the Environmental Impact Statement review and approval so that construction of the PGT-PG&E Expansion Project can commence construction in a timely manner.

Sherman County Court

Rodney P. Rolfe
County Judge

John Schadewitz
County Commissioner

Bob Boynton
County Commissioner

LA2-1 Thank you for your comment. No response required.

LA-4

IN THE COUNTY COURT OF THE STATE OF OREGON
IN AND FOR THE COUNTY OF SHERMAN

In the Matter of the Approval)
and Support of the PGT-PG&E)
Pipeline Expansion Project)

RESOLUTION NO. 8-06-90

On this, the 6th day of June, 1990, the above entitled Court being in regular session for the transaction of County business and the matter of the approval and support of the PGT-PG&E Pipeline Expansion Project being before the Court;

WHEREAS, Pacific Gas Transmission Company is seeking Federal Energy Regulatory Commission approval to expand its natural gas pipeline facilities from the Canadian-U.S. Boundary to serve growing natural gas markets in the Pacific Northwest and California; and

WHEREAS, the PGT-PG&E Pipeline Expansion Project is the most economical way to bring low-cost Canadian natural gas to the Pacific Northwest region and the expansion will provide increased access to vast, long-term Canadian natural gas supplies to the Pacific Northwest, thereby benefiting the environment, local residents, commercial and industrial natural gas customers in the region; and

WHEREAS, the PGT-PG&E Expansion Project is environmentally sound, utilizing existing rights-of-way to parallel the existing system, which has performed admirable during the 28 years of its operation; and

WHEREAS, the pipeline expansion will contribute to the local economy and increase property tax revenues to the counties through which it passes; and

WHEREAS, the pipeline expansion has a full set of customers willing to bear all costs of the project and utility and non-utility shippers have signed an agreement resolving all issues between them, demonstrating the need for the project and the unity and commitment to the project by those parties;

NOW, THEREFORE, BE IT RESOLVED, that the Sherman County Court fully supports and endorses the PGT-PG&E Pipeline Expansion Project and urges the Federal Energy Regulatory Commission to review and approve expeditiously the application so that construction of the project may commence in a timely fashion.

SHERMAN COUNTY COURT

By: ______________________
County Judge

By: ______________________
County Commissioner

By: ______________________
County Commissioner

ATTEST: ______________________
County Clerk

[Kootenai County Weed Control, Coeur d' Alene, Idaho]

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
) CP90-1375-000

91 MAR -7

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Mark C. Kalpin, Environmental Compliance Branch, Room 7312, at the same address.

All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Bonners Ferry, ID

Commentar's Name and Address: Kootenai County Weed control
106 Dalton Avenue
Coeur d'Alene, ID 83814

Kootenai County will be looking forward to assisting in development of a weed management plan for the section of the pipeline in this county.

The following are comments pertaining to the draft:

LA3-1 1. The E I S has a statement on page 2-41 "Harbicides would not be used for rights-of-way maintenance". In many situations use of approved herbicides is an important tool to control invasions and spread of weeds We recommend this statement be revised to "herbicides will be used in rights-of-way maintenance as provided in the Weed Management Plan.

LA3-2 2. In B-1-7 there is a formula to determine amount of seed to be applied based on purity. In the long run it is less costly to require 100% weed free seed Therefore, we recommend all revegetation seed mixtures be free of all weed seeds, Idaho Seed Lab tested preferably locally produced to be adapted to local conditions.

LA3-3 3 The E I S provides for use of mulch to stabilize soil (refer: B-1-7] Mulch can be a major source of weed seed and plant parts resulting in rapid spread of weeds We recommend a provision be provided to require use of mulch that is free of weed seed and plant parts, preferably locally produced.

LA3-4 4 The section on monitoring in the Erosion Control, Revegetation, and Maintenance Plan should include weeds along with the soil and vegetation concerns

LA3-5 5 The final should note and include provisions for cleaning of construction equipment as it works across and through weed infestation sites into weed free areas. We also recommend a provision that requires construction equipment be cleaned before entering and as it leaves the county.

cc. Idaho Panhandle N F

LA3-1	Staff's recommended mitigation Measure No. 23 in the Draft EIS requires PGT to develop and implement, in consultation with the appropriate state and/or local agencies, a plan for the control of noxious weeds. The commentor, as an appropriate local agency, amy require the inclusion and implementation of its recommended measure in the staff's recommended Noxious Weed Control Plan.
LA3-2	See response to Comment LA3-1.
LA3-3	See response to Comment LA3-1.
LA3-4	See response to Comment LA3-1.
LA3-5	See response to Comment LA3-1.

LA-6

While Altamont has proposed a variety of seed mixes based on soil type, it has not proposed to reseed all areas. We recommend that Altamont reseed all areas disturbed by construction except for annually cultivated areas. Privately owned lands should be reseeded either in accordance with our recommendations that are presented in Appendix B-3 or with a seed mix specified by the landowner. We recommend inoculation of legumes with the proper rhizobium where legumes are included in the seed mixes.

The complexity of Altamont's seeding plan would require careful inspection and testing of the soil to ensure that the seed mixture applied reflects site-specific soil conditions. Based on consultations with the BLM, SCS and the Montana DNRC, we have specified some changes in species composition proposed by Altamont. In addition, we have adjusted the seeding rates in Altamont's proposed mixes. The changes made to Altamont's proposed seed mixes are summarized in Appendix B-3. If some species are not available Altamont should consult with local land managing agencies or soil conservation authorities to determine replacement seed species.

Fertilizing. PGT does not have a definite plan for fertilizing. In Idaho we recommend PGT use 16-20-0 at the rate of 60 pounds of nitrogen (of which at least 50 percent must be of slow release form) per acre. In Washington and non-National Forest lands of Oregon, fertilizer is not recommended unless otherwise indicated by the local soil conservation authorities or landowners. We recommend that PGT consult with the FS or BLM, depending on jurisdiction, or other soil conservation authorities to determine what, if any, fertilizer requirements these agencies recommend for use on federally managed lands. See Appendix B for more information.

We recommend that no fertilizer be used by Altamont except for where calcareous soils of the broad terraces north and south of Harlowtown, Montana are encountered (the Windham, Utica, and Musselshell series), or if requested by landowners. It is generally agreed that fertilizing will compound weed infestation problems and attract an excessive amount of grazing animals. Where calcareous soils are encountered in Montana, we recommend that Altamont apply 100 pounds of sulfur-coated 16-20-0 per acre.

Weed Control. PGT did not include a weed control component in its preliminary rehabilitation plan. It is likely that weeds could be a problem in some areas. The most notable of these is spotted napweed in Bonner and Kootenai Counties in Idaho, and in other areas of high rainfall or where irrigation occurs. Therefore, we recommend that PGT develop a plan, in coordination with the appropriate federal, state, or local agencies, to control weed problems where they are encountered.

Altamont has committed to spot spray areas where weed problems occur. This would be adequate unless the problem is on a grand scale. In some areas in central Montana broadcast spraying may be necessary such as in Judith Basin and Fergus Counties. The Montana County Noxious Weed Management Act would require Altamont to develop a revegetation and weed control plan for approval by the weed board of each county crossed. In Wyoming, we recommend that the environmental inspector determine what type of weed control, if any, is

PGT and PG&E have operating and maintenance plans that comply with the DOT regulations and applicable state regulatory requirements. To the extent necessary, these plans would be revised to incorporate the new project facilities.

The project is designed so that all facilities can, in conjunction with the existing pipeline, be monitored, controlled, and operated in a safe and reliable manner through a telemetry system linked to PGT and PG&E gas control centers. The system operation does not require 24 hour maintenance/operation personnel at the sites; however, under normal operating conditions, maintenance personnel generally inspect compressor and delivery sites daily during the work week. Other facility sites are checked on an established schedule.

Operating personnel live in communities along the system so that they can reach any area within a short period, in case of an emergency or malfunction. All equipment containing moving parts, such as the compressors, receive periodic maintenance on a scheduled, time-of-use basis. The pipeline right-of-way is surveyed on a set schedule for evidence of leaks, erosion damage, and right-of-way encroachment. The pipeline is routinely monitored for corrosion control.

Trees would be periodically removed along a 40-foot-wide strip above the pipeline. When these trees are 2-3 inches diameter at breast height (dbh) they would be mechanically cut, chipped into pieces less than 3 inches long, and scattered over the right-of-way. PGT/PG&E would allow natural revegetation to occur over the remainder (approximately 60 feet) of the right-of-way. This procedure, although in place for the existing pipeline, was never performed due to delays in the expected clearing and looping of the expansion project. PGT has found evidence of wind erosion in certain areas of sandy soil. On occasion, wind uncovers short segments of pipe. Revegetation of the disturbed area has proven to be the most successful approach to maintaining necessary pipe cover.

Herbicides would not be used for right-of-way maintenance. Regulatory agency-approved herbicides would be used to control vegetation in the fenced, aboveground facilities. These areas include unpaved portions of compressor stations, metering stations, and valve lots.

To facilitate repairs, equipment, tools, pretested pipe, and other repair materials for emergency use are stored at existing maintenance bases located along the pipeline. In addition, pretested pipe is currently stockpiled at two storage sites near critical locations that are not accessible to heavy trucks during adverse weather conditions. These two sites are located in Thirtymile Canyon (east of the John Day River) and Pine Canyon (west of the John Day River). Sections of pipe and other repair materials for the 12 loops would also be stored at existing locations.

2.3.6 Future Plans

Abandonment of Facilities. PGT and PG&E have no plans to abandon existing or proposed facilities. Should the pipeline be abandoned, the pipe would either be abandoned in place or removed and salvaged. Compressor stations and related facilities would also be dismantled and salvaged. Concrete and pavement would be broken up and disposed of in an approved disposal area or left in place. Pipe installed in rivers, creeks, and lakes would

LA-8

[Town of Greybull, Greybull, Wyoming]

HUB OF THE BIG HORN BASIN

Town of Greybull . . .

24 South 5th Box 271 Greybull, Wyoming 82426 Phone (307) 765-9431

February 26, 1991

RECEIVED BY
MAR 05 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Mr. Laurence J. Sauter, Jr.
Environmental Compliance Branch, OPPR
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Mr. Sauter:

Re: Docket No. CP90-1375-0, Altamont Gas Transmission Company

After reviewing the EIS and listening to and reading some of the comments about it, I would like to add my views on the matter.

LA4-1 I can see no reason why Altamont should not be permitted to route their transmission pipeline across South Pass. It seems to me that they have addressed most situations that might possibly arise, and can move through the area with an absolute minimum of temporary damage, and no permanent marring of any historical or environmentally sensitive areas.

Some comments I have read speak of access roads and parallel pipelines. From what I see, only one line is being addressed here and they plan to use the pipeline right-of-way as access. I am as sensitive to preservation of historical sites as the next man, but I also must be responsive to the needs of my community and our state. The area through which the pipeline passes will derive great economic benefit from its construction.

Since no one has shown that there will be permanent damage to the area in question, I most emphatically voice my opinion in favor of the South Pass right-of-way.

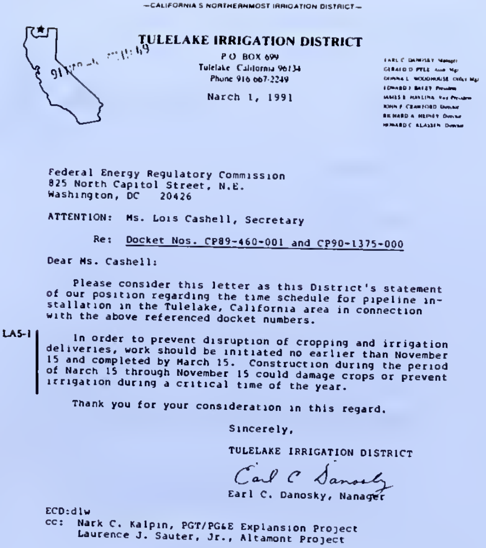
Sincerely,

Michael V. Mayville, Mayor

cc: Governor Mike Sullivan

LA4-1 Thank you for your comments.

[Tulelake Irrigation District, Tulelake, California]



—CALIFORNIA'S NORTHERNMOST IRRIGATION DISTRICT—

TULELAKE IRRIGATION DISTRICT

P.O. BOX 699
Tulelake, California 96134
Phone 916 667-2249

EARL C. DANOSKY Manager
GERALD D. PYLE Asst. Mgr.
DONNA L. WOODHOUSE Office Mgr.
EDWARD J. BALEY President
JAMES E. HAVLINA Vice President
JOHN F. CRAWFORD Director
RICHARD A. HEINEY Director
HOWARD C. KLASSEN Director

March 1, 1991

Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

ATTENTION: Ms. Lois Cashell, Secretary

Re: Docket Nos. CP89-460-001 and CP90-1375-000

Dear Ms. Cashell:

Please consider this letter as this District's statement of our position regarding the time schedule for pipeline installation in the Tulelake, California area in connection with the above referenced docket numbers.

LA5-1 In order to prevent disruption of cropping and irrigation deliveries, work should be initiated no earlier than November 15 and completed by March 15. Construction during the period of March 15 through November 15 could damage crops or prevent irrigation during a critical time of the year.

Thank you for your consideration in this regard.

Sincerely,

TULELAKE IRRIGATION DISTRICT

Earl C. Danosky

Earl C. Danosky, Manager

ECD:dlw
cc: Mark C. Kalpin, PGT/PG&E Explansion Project
Laurence J. Sauter, Jr., Altamont Project

LA5-1 Thank you for this information. The PG&E facilities in California are not under FERC's jurisdiction. On December 27, 1990, the California Public Utilities Commission (CPUC) authorized the construction of the PG&E facilities in California. This authorization was conditioned on PG&E's implementation of mitigation measures which the CPUC determined would minimize or eliminate significant environmental impacts.

LA-10

[Klamath Irrigation District, Klamath Falls, Oregon]

KLAMATH IRRIGATION DISTRICT
HEADQUARTERS OFFICE
6640 K I D LANE – (503) 882-6681
KLAMATH FALLS OREGON 97603

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

February 28, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capital St., N.E.
Washington D.C. 20426

RE: Comments – Docket CP 89-460-001
Docket CP 90-1375-000

Dear Ms. Cashell:

Klamath Irrigation District entered into Contract No. 14-06-200-3784 titled AMENDATORY CONTRACT BETWEEN THE UNITED STATES OF AMERICA AND THE KLAMATH IRRIGATION DISTRICT in 1954, which transferred the operation and maintenance of the D canal to the District.

LA6-1 The proposed gas line projects would intersect the D canal twice, once in Oregon and once in California. Any construction activity would not be allowed to interfere with water deliveries to Klamath Irrigation District lands. Our normal water season is April 1 through October 15.

Please include the District on your list to receive any information concerning the proposed projects.

Sincerely,

Dave Solem

Dave Solem
Manager

P.C. Mark Kirkpatrick
Laurence Sauter

LA6-1 Thank you for this information.

[Bonner County Noxious Weed Control, Sandpoint, Idaho]

BONNER COUNTY NOXIOUS WEED CONTROL

BONNER COUNTY IDAHO

P O BOX 1526 SANDPOINT, IDAHO 83864 263-1114

JOHN E BAKER
Bonner County
Weed Superintendent

Susan MacLeod
County Commissioner Dist No 1
DEAN STEVENS
County Commissioner Dist No 2
JAMES McNALL
County Commissioner Dist No 3

RECEIVED BY

MAR 0 6 1991

ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

To: Secretary, Federal Energy Regulatory Commission

Fr: John E. Baker
Bonner County Weed Superintendent

Re: Pacific Gas Transmission Pipeline Projects

LA7-1 It is recommended by Bonner County that Pacific Gas Transmission Company clean all equipment before moving it to different areas and clean all equipment after useage in an area before it is removed from that area.

It is also recommended that all soil that is disturbed be reseeded, with a follow-up in two years. A commercial applicator should be hired to treat all weeds.

If you have any questions regarding these comments, please let me know.

JEB/aji

cc: Mr. Mark C. Kalpin

LA7-1 Thank you for your comment. Your concerns are addressed in Chapters 4B and 6, and in the staff's recommended mitigation measures.

[Modoc County Department of Agriculture, Alturas, California]

MODOC COUNTY
DEPARTMENT OF AGRICULTURE
202 West 4th Street
Alturas, CA 96101

CLINTON B. GREENBANK
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES
AIR POLLUTION CONTROL OFFICER
PREDATORY ANIMAL CONTROL OFFICER
PHONE (916) 233-3939 EXT 401

LESLIE E. WRIGHT
DEPUTY AGRICULTURAL COMMISSIONER
DEPUTY SEALER OF WEIGHTS AND MEASURES
P.O. BOX 222
TULELAKE CA 96134
PHONE (916) 667-2713

RECEIVED BY
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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

March 1, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Docket Nos. CP89-460-001
CP90-1375-000

Dear Ms. Cashell,

LA8-1 I welcome the opportunity to comment on the Draft EIS for the P.G.T. - P.G.E. Pipeline Expansion Project.

Landowners in Modoc County are very concerned about the real possibility of the introduction and/or spread of nematode pests by vehicles and machinery during the construction of the Project.

The three nematodes of main concern in the area are the Columbia root-knot nematode, _Meloidogyne chitwoodi_, the barley root-knot nematode, _Meloidogyne naasi_, and the northern root-knot nematode, _Meloidogyne hapla_. All are known to exist in areas of both the California and Oregon portions of the Tulelake basin. Once a field is infested, this pest cannot be eradicated and control measures are slowly disappearing due to EPA and California Department of Food & Agriculture cancellations of effective control materials.

Infestations of these destructive nematodes in production agricultural land results in increased production costs, reduced yields, and reduction of land value. For this reason, landowners take precautions to prevent the spread of the pest from infested land to non-infested land. Certified seed potatoes are grown in some areas of the proposed pipeline route and even a small population of nematodes renders that ground unusable for certified seed production.

After the existing natural gas pipeline transmission system was constructed, nematode infestations were discovered in land not previously known to be infested. The infestations were found along the pipeline right of way, strongly suggesting the pest was introduced or spread by

LA8-1 Thank you for this information. See revised Chapter 4 and 6. For issues in California, see response to Comment LA5-1.

LA8-1 (cont.) construction vehicles or machinery.

I strongly recommend that the EIS clearly states that construction equipment and vehicles will be sterilized prior to entering Modoc County and prior to moving from one separate field to another.

Sincerely,

Clinton B. Greenbank

Clinton B. Greenbank, Agricultural Commissioner

CBG:vk

CC: Mr. Mark C. Kalpin
Mr. Laurence J. Santer, Jr.

ORIGINAL **LA-14**

[Lava Beds Resource Conservation District, Washington, D.C.]

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MAR 06 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

91 MAR -4 PM 2:37

February 27, 1991

Ms. Lois Ca hell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Ms. Cashell;

LA9-1 The Lava Beds Resource Conservation District wishes to comment on the Draft Environmental Impact Statement for the PGT/PG&E Expansion - Altamont Natural Gas Pipeline Project, specifically that portion related to the PG&E Expansion, Docket No. CP89-460-001 within our Resource Conservation District which lies within the Tulelake Basin of California.

The soils within the Tulelake Basin and within our Resource Conservation District have been classified by the USDA Soil Conservation Service as prime and unique farm lands.

The construction activities necessary to install the proposed 42" natural gas pipeline will have a significant negative impact on the productive capability of these soils unless mitigation measures are taken to insure that such damage is minimized or eliminated.

The Lava Beds Resource Conservation District, based upon information provided by the USDA Soil Conservation Service and the previous local experience of the agriculturists within our community with PG&E, feels that the highly complex and variable nature of the soils within the project area require that the following mitigation measures be implemented as part of the final environmental impact statement (Docket No. CP89-460-001) to insure that the productive capability of the prime and unique soils within our area are maintained.

Mitigation Measures

1. Spoil materials, such as rock and debris, from this pipeline construction must be buried substantially below existing agricultural field elevations.

2. Surface soils shall be removed from the area directly above the proposed pipeline and be stockpiled and replaced as topsoil following the installation of this pipeline. The depth of material removed from above the pipeline will be based upon the depth of the soil series which occurs on specific properties along the pipeline easement.

LA9-1 See response to Comment LA5-1.

LA9-1 (cont.)

3. Where specific soil series have adequate depth the surface soils should be removed to a depth of 36" and stockpiled for use as topsoil following the pipeline installation.

4. Specific construction standards and specifications addressing items 1 through 3 above be identified as part of the environmental mitigation measures for this project.

5. That the Lava Beds Resource Conservation District or its agent act as a independent liaison between Pacific Gas & Electric and/or its agents and the private landowners within the Tulelake area to insure that items 1 through 4 are implemented to minimize the impacts of this project on the agricultural resources of the Basin.

Comments of a similar nature have been provided to the Pacific Gas & Electric company and their representatives. Copies of that correspondence as well as soils information provided by the USDA Soil Conservation Service are also enclosed.

Sincerely,

Mike Byrne

Mr. Mike Byrne, Chairman
Lava Beds Resource Conservation District
Route 1, Box 246-AA
Tulelake, CA. 96134

CC. Mr. Wally Herger, Congressman
Mr. Stan Statham, Assemblyman-1st District
Mrs. Nancy Huffman, Supervisor
Modoc County Board of Supervisors
Mr. G. Mitchell Wilk, President
California Public Utilities Commission
Mr. Mark C. Kalpin, FERC Environmental Project Manager
Mr. Jack Somerville, Chairman-California
Association of Resource Conservation Districts
Mr. Pat Truman, Chair-Area 1 Association of
Resource Conservation Districts
Mr. Ken Trott, California Department of Conservation
Mr. Gene Q. Kelley, District Conservationist
USDA Soil Conservation Service
Mr. Will Thomas, Lands Division
Pacific Gas & Electric
Ms. Teresa Covert, Acquisition Supervisor
PGT-PG&E Pipeline Expansion Project
Nancy Reeves, Senior Right of Way Agent
Pacific Gas & Electric
Office Copy FERC291

LA-16

[Deschutes County Board of Commissioners, Bend, Oregon]

DESCHUTES COUNTY
Board of Commissioners

Administration Building
1130 N W Harriman / Bend, Oregon 97701
(503) 388-6570
Dick Maudlin
Tom Throop
Nancy Pope Schlangen

January 29, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street NE
Washington, D.C. 20426

RE: Docket No. CP89-460-001
Pacific Gas Transmission Company
PGT-PG&E Pipeline Expansion

Dear Ms. Cashell:

LA10-1 Last year, the Deschutes County Board of Commissioners approved a resolution supporting the PGT-PG&E Pipeline Expansion Project. We wish to reaffirm to you our support for this project during the public comment period for the Federal Energy Regulatory Commission's draft Environmental Impact Statement.

On behalf of the citizens of Deschutes County, we urge your prompt completion of the Environmental Impact Statement for this project and approval so that construction of the PGT-PG&E Expansion Project can begin in a timely manner.

Sincerely,

DESCHUTES COUNTY BOARD OF COMMISSIONERS

Tom Throop, Commissioner

Nancy Pope Schlangen
Nancy Pope Schlangen, Commissioner

Dick Maudlin
Dick Maudlin, Chairman

BOCC:alb

LA10-1 Thank you for your comment.

[Stillwater County Commissioners, Columbus, Montana]

Docket Nos.
Pacific Gas Transmission Company) CP89-460-001
Altamont Gas Transmission Company) CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Laurence J. Sauter, Jr., Environmental Compliance Branch, Room 7312, at the same address.

All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

John J Beaudry

Meeting Location: Billings, MT

Commenter's Name and Address: Stillwater County Commissioners
P.O. Box 147
Columbus, MT 59019

LA11-1 Approximately 15 road cuts will be required on County Roads in Stillwater County, Montana. We do not object to road cuts on gravel roads, but we would prefer the boring method be used under the Rapelje Road (FAS 306) in order to preserve the paved driving surface.

LA11-2 We appreciate the inclusion of socio-economic considerations for the temporary workforce of approximately 530 people and impacts to local government facilities and services. However, the DEIS does not adequately identify the affect the project would have on the tax base for each County. Without this information, it is difficult to assess costs vs. benefits.

We look forward to working with Altamont project contractors on these issues and wish you the best of luck with this project

LA11-1 Thank you for your comments. The EIS acknowledges that local permitting authorities have the responsibility for determining whether county and local road crossings would be open-cut or bored. See Table 1-4 and Chapter 4J.

LA11-2 Comment noted. Please see new material added to Chapter 4G.

LA-18

[Sherman County, Moro, Oregon]

SHERMAN COUNTY

500 COURT STREET
MORO OREGON 97039
FAX 565 3312

March 6, 1991

RECEIVED BY
MAR 11 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS GROUP

Mr. Mark C. Kalpin
PGT/PG&E Expansion Project
Federal Energy Regulatory Commission
825 North Capitol Street NE
Washington, DC 20426

Dear Sir:

LA12-1 We are writing to you regarding the PGT project involving the John Doy River Area in southern Sherman County. The original pipe line, which was installed in the early 1960s at Pine Hollow has room for two more pipelines. This old route has been overlooked as an alternative due to flood problems down Thirty Mile Creek, the east side of John Day River. No mention from data gathered of flood problems in Pine Hollow. If this old route is dangerous for the pipeline then consideration should be given to pulling out the old pipeline and rerouting it along the new proposed pipeline in a different location. As long as the present route is safe for the existing line and there has been no consideration to remove it then this should indicate that it is reasonable to put the additional pipeline on the existing right-of-way in Pine Hollow. Assuming the pipeline will go back in Pine Hollow, PGT would be able to spend more money in restoring the riparian area and insure the stability of both pipelines because routing the new pipeline back up Pine Hollow would be less costly than using the John Day Variation with or without the Hannafin Canyon alternative.

The John Day Variation would route the new pipeline within view of the federally designated Wild and Scenic John Day River crossing at MP358.

This route would leave long-term scars (see picture) on the landscope because of low soil rehabilitation, steep canyon walls and due to our dry climate would delay recovery time for the area. Sherman County would need clean, weed-free material brought in to bed the pipeline. This is not practical. Both the John Day Variation route and the Honnolin Canyon alternative present problems with surplus excavated material.

LA12-2 Our choice is to have the new pipeline in Pine Hollow. If we must choose, we prefer the John Day Variation over the Hannafin Canyon Route.

SHERMAN COUNTY COURT

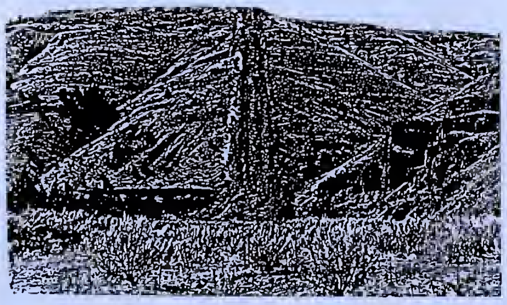
County Judge

John Schadewitz
County Commissioner

County Commissioner

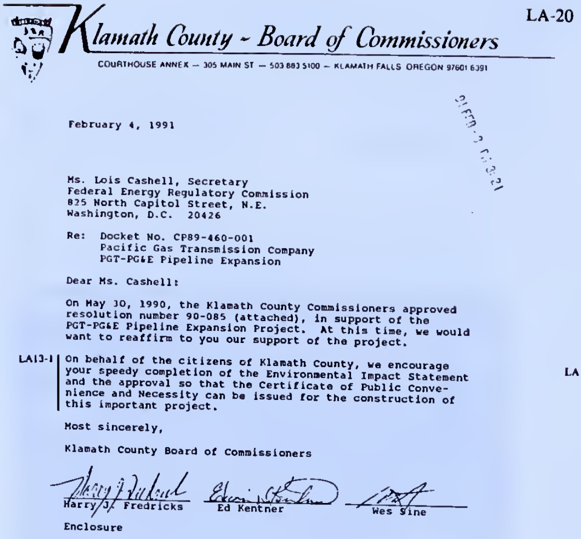
LA12-1 Thank you for your comment. Please see revised Chapters 4A, 4B, and 4L.

LA12-2 Thank you for your input. See revised Chapter 6.



LA-20

[Klamath County Board of Commissioners, Klamath Falls, Oregon]



Klamath County - Board of Commissioners

COURTHOUSE ANNEX — 305 MAIN ST — 503 883 5100 — KLAMATH FALLS OREGON 97601 6391

91 FEB -8 PM 3:21

February 4, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Docket No. CP89-460-001
Pacific Gas Transmission Company
PGT-PG&E Pipeline Expansion

Dear Ms. Cashell:

On May 30, 1990, the Klamath County Commissioners approved resolution number 90-085 (attached), in support of the PGT-PG&E Pipeline Expansion Project. At this time, we would want to reaffirm to you our support of the project.

LA13-1 On behalf of the citizens of Klamath County, we encourage your speedy completion of the Environmental Impact Statement and the approval so that the Certificate of Public Convenience and Necessity can be issued for the construction of this important project.

Most sincerely,

Klamath County Board of Commissioners

Harry J. Fredricks — Harry J. Fredricks
Edwin Kentner — Ed Kentner
Wes Sine

Enclosure

AN EQUAL OPPORTUNITY EMPLOYER

LA13-1 Thank you for your comment. No response required.

BOARD OF COUNTY COMMISSIONERS Date

BOARD OF COUNTY COMMISSIONERS

KLAMATH COUNTY, OREGON

Date [illegible]
Original [illegible]
Copies [illegible]
[illegible]

IN THE MATTER OF SUPPORTING)
AND ENDORSING THE PGT-PG&E)
PIPELINE EXPANSION PROJECT IN)
KLAMATH COUNTY, OREGON)

RESOLUTION NO. 90-085

WHEREAS, Pacific Gas Transmission Company is seeking Federal Energy Regulatory Commission approval to expand its natural gas pipeline facilities from the Canadian-United States boundary to serve growing natural gas markets in the Pacific Northwest and California; and

WHEREAS, the PGT-PG&E Pipeline Expansion Project is the most economical way to bring low-cost Canadian natural gas to the Pacific Northwest region and the expansion will provide increased access to vast, long-term Canadian natural gas supplies to the Pacific Northwest, thereby benefiting the environment, local residents, commercial and industrial natural gas customers in the region; and

WHEREAS, the PGT-PG&E Expansion Project is environmentally sound, utilizing existing rights-of-way to parallel the existing system which has performed admirably during the 28 years of its operation; and

WHEREAS, the pipeline expansion will contribute to the local economy and increase property tax revenues to the counties through which it passes; and

WHEREAS, the pipeline expansion has a full set of customers willing to bear all costs of the project and utility and non-utility shippers have signed an agreement resolving all issues between them, demonstrating the need for the project and the unity and commitment to the project by those parties;

NOW, THEREFORE, BE IT RESOLVED that the Klamath Board of County Commissioners fully supports and endorses the PGT-PG&E Pipeline Expansion Project and urges the Federal Energy Regulatory Commission to review and approve expeditiously the application so that construction of the project may commence in a timely fashion.

DONE and DATED this 30th day of May, 1990.

CHAIRMAN OF THE BOARD

COUNTY COMMISSIONER

COUNTY COMMISSIONER

LA-22

[Umatilla County Board of Commissioners, Pendleton, Oregon]

UMATILLA COUNTY BOARD OF COMMISSIONERS
Courthouse, 216 S E 4th, Pendleton, Oregon 97801 • Telephone 503 276 7111

Bill Hansell Glenn Youngman, Emile Holeman
COMMISSIONERS

February 6, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Re: Docket No. CP89-460-001
Pacific Gas Transmission Company
PGT-PGE Pipeline Expansion

Dear Ms. Cashell:

In June of last year, the Commissioners of Umatilla County approved a resolution (attached) in support of the PGT-PGE Pipeline Expansion Project. At this time, during the public comment period for the Federal Energy Regulatory Commission's draft Environmental Impact Statement we want to reaffirm to you our support for this project.

LA14-1 On behalf of the citizens of Umatilla County, we urge your prompt completion of the Environmental Impact Statement review and approval so that construction of the PGT-PGE Expansion Project can commence construction in a timely manner.

Sincerely,

UMATILLA COUNTY
BOARD OF COMMISSIONERS

Glenn Youngman
Glenn Youngman, Chairman

Bill Hansell
Bill Hansell

Emile M. Holeman
Emile Holeman

LA14-1 Thank you for your comment. No response required.

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR UMATILLA COUNTY

IN THE MATTER OF SUPPORTING AND)
ENDORSING THE PGT-PG&E PIPELINE)
EXPANSION PROJECT)

WHEREAS, in the nearly thirty years Pacific Gas Transmission Company has been operating in Umatilla County they have had an environmentally sound operation;

WHEREAS, the proposed pipeline expansion will stay within their existing right-of-way;

WHEREAS, the proposed pipeline expansion will enhance and increase service capability;

WHEREAS, the pipeline expansion will benefit residents of Umatilla County with increased tax revenue;

RESOLVED, that the Umatilla County Board of Commissioners fully supports and endorses the PGT-PG&E Pipeline Expansion Project and urges the Federal Energy Regulatory Commission to review and approve expeditiously the application so that construction of the project may commence in a timely fashion.

DATED this 10th day of May, 1990.

UMATILLA COUNTY BOARD OF
COMMISSIONERS

William S. Hansell
WILLIAM S. HANSELL, CHAIR

GLENN YOUNGMAN

JEANNE HUGHES

ATTEST:

JOYCE GERDES, County Clerk

CP89-460-001 , CP90-1735-000

LA-24

[Wasco County Court, Wasco, Oregon]

IN THE COUNTY COURT OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

FILED WASCO CTY
THE DAL[illegible] OR.
MAR 4 1 11 PM '91
KAREN [illegible]
COUNTY CLERK

IN THE MATTER OF SUPPORTING THE)
PGT-PG&E PIPELINE EXPANSION)
PROJECT.)

RESOLUTION

LA15-1 WHEREAS, Pacific Gas Transmission Company is seeking Federal Energy Regulatory Commission approval to expand its natural gas pipeline facilities from the Canadian-U.S. Boundary to serve growing natural gas markets in the Pacific Northwest and California; and

WHEREAS, The PGT-PG&E Pipeline Expansion Project is the most economical way to bring additional quantities of low-cost Canadian natural gas to the Pacific Northwest region and the expansion will provide increased access to vast, long-term Canadian natural gas supplies to the Pacific Northwest, thereby benefiting the environment, local residents, commercial and industrial natural gas customers in the region; and

WHEREAS, the PGT-PG&E Expansion Project is environmentally sound, utilizing existing right-of-way to parallel the existing system, which has performed admirably during the 30 years of its operation; and

WHEREAS, the pipeline expansion will contribute to the local economy and increase property tax revenues to the Counties through which it passes; and

WHEREAS, the pipeline expansion has a full set of customers willing to bear all costs of the project and utility and non-utility shippers have signed an agreement resolving all issues between them, demonstrating the need for the project and the unity and commitment to the project by those parties.

/////

LA15-1 Thank you for your comment. No response required.

LA15-1 (cont.)

NOW, THEREFORE, BE IT RESOLVED: That the Wasco County Court fully supports and endorses the PGT-PG&E Pipeline Expansion Project and urges the Federal Energy Regulatory Commission to review and approve expeditiously the application so that construction of the project may commence in a timely fashion.

DONE AND DATED THIS 20th day of February, 1991.

WASCO COUNTY COURT

John Mabrey
John Mabrey, County Judge

Scott McKay, County Commissioner

C. E. Filbin
C.E. Filbin, County Commissioner

APPROVED AS TO FORM:

Bernard L. Smith
Wasco County District Attorney

Groups and Individuals Comments

Groups and Individuals Comments

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Statement; To USA Fed Reg/ Commission 2 26 91 Riverton Wy.

GII-1 I am Larry Higby, Lander Wy.. I represent myself. I am of Rancher type background-family taxpayers in Wyo. since early 1880s. I have substantial academic and experiential background in the Social sciences. I do not have a typist or word processor.

I AM a TOTAL environmentalist.

I am NOT a pseudo or fictional environmentalist.

I AM interested in and dedicated to the entire dynamic environment of man and animal, past, present and future.

The environment of man and animal includes not only the plants, dirt, and diversity of species, but the entirety of the economic and social fabric from which every phase of the total environment MUST draw its continued existence.

NO particular phase or factor can be either ignored or isolated out for segregated attention.

ALL phases and factors must ultimately be constructively coordinated for our continued existence.

NOTHING is static. Everything previously known or unknown, currently known, or coming in the future is dynamically changing. The very rocks on which we stand are in a constant state of metamorphosis. In some past they were not as they are now. after future some they will again be unrecognizable. Alaska is in a constant state of self destruct. The Wind River Mtns were 40 to 60,000 feet high.

Every living and non living thing has been subject to dynamic change through the eons, and will continue to be subject to further dynamic change in the future.

While pseudo environmentalists can cry "Stop the world, I want to get off" untill they are gone and forgotten, evolutionary dynamics will continue right on into the future. The most that can be accomplished is a tiny, temporary preservation of "Today".

Attempted ignoring the other major environmental factors - economic, social, technological, etc. will only distort the current process.

These massive Environmental Impact Statements are expensive,
me consuming, and should be informative. They may be made [illegible]-
ly complete at any one time. They are descriptive of only a
ng phase. As with all "Monday Morning Quarterbacking", critics
vitably find ever finer dissections to be done. Take one
m to the bugs and worms, surely the microbes and germs

[Larry Higby]

GII-1 Thank you for your comments.

GI-2

GII-1 (cont.)

2 Deserve equal time and credit. If we wait for all the green lights we'll never start, and even if we did start, on all green lights, some ahead would turn red ! We must THINK our way ahead.

My major impression over the years is that these panicky critics are first, last, and always obstructionists. For the sake of emphasizing their particular isolated factor ofthe environment, they distort, imagine, and implement every conceivable excuse to stop anything or anything . This appears to me to be the primary objective of the E.I.S. process. "Spend it to death"!

In evaluating this E.I.S. Dynamic judgement should be used to calculate the compromises and trade-offs for the maximum benefit of mankind and all related environmental factors.

Eternally expending more and more of our effort on lesser and lesser increments can only be self defeating. The Fetish of the E.I.S. (beyond valuable hard planning data) and the "New religion" of pseudo environmentalism will not support us and the animal world; Nor will it support the new lives being added due to the breakdown of responsible social structure. The magical and ceremonial significance of the E.I.S. is unproductive.

ABout this pipeline; few people except deliberate seekers will ever notice the crossing of the pipeline and the trail at the highway crossing. Very few will even notice it farther out. The locations are very un noticeable - with technological correct restoration.

Stream crossings are demonstrably restorable - by inteligent effort - not necessarily by a piece of paper.

Geological faults and slide areas can be technologically isolated for instant shutoff.

As a lifelong hunter, I observe maximum assimilation by game IF time and human numbers do not reduce food capacity. The tourist promotion of the South Pass Area will have a far greater impact than the pipeline. Why not keep THEM out? Where is THEIR E.I.S.?

All ofthese things should be relative, and IN context instead of distortedly drawn OUT of context

Thank You

Lawrence H. (Larry) Higby
1684 Hillcrest drive,
Lander Wy 82520

WYOMING CHAPTER
OREGON-CALIFORNIA TRAILS ASSOCIATION
P.O. Box 40121 Casper, Wyoming 82604

COMMENTS on the DEIS Regarding the

Altamont Natural Gas Pipeline Project,

February 26, 1991

PRESENTED at the DEIS Public Hearing In Riverton, Wyoming

My name is Ronald R. Lund. I am the President of the Wyoming Chapter of the Oregon-California Trails Association. I have been asked to comment on behalf of the Board of Directors of the Wyoming Chapter as well as on behalf of the Officers and the Board of Directors of the national organization of the Oregon-California Trails Association.

The primary purposes of OCTA include the protection and preservation of the national historic trails and to promote education about those trails. For those reasons, OCTA has a significant interest in this pipeline project. The Draft Environmental Impact Statement offers essentially seven alternatives, six alternate routes and the "No-Action Alternative."

If the "No-Action Alternative" is chosen, this pipeline would not be approved and there would be no threat to the trails from that source. That would, of course, be an acceptable option from the point of view of OCTA.

GI2-1 The six alternate routes, published in the DEIS, all cross the Oregon, California, Mormon, and Pony Express Trails at least twice. In previous communications, on behalf of the Wyoming Chapter of OCTA, I had suggested that a route be studied that closely followed the Highway 28 right of way, preferably to the west of the highway. Such a route could possibly avoid the main trails entirely. That suggestion was, apparently, not given serious consideration and was not discussed in the DEIS.

We are, therefore, left with making a judgement on which parts of the trail have the greatest historic and cultural value. As we have indicated in multiple previous communications, OCTA believes that the trails through the South Pass region and its immediate environs should GI2-2 be avoided. That the summit of South Pass is a special site is undisputed amongst historians, and this point seems to be recognized in the DEIS. We continue to urge that the pipeline not pass through the South Pass region.

The Jeffrey City Variation, the Alkali Butte Variation, and the Northern Utilities Variation all fulfill this quality of avoiding the

[Ronald Lund, Oregon-California Trails Association, Wyoming]

GI2-1 The Route 28 Variation was designed and included in the EIS in response to this suggestion. This variation would not avoid crossing the Oregon-Mormon Trail.

GI2-2 The Proposed route has been realigned to avoid crossing the South Pass NHL (which includes the South Pass Summit).

GI2-3 South Pass region. We would not object to any of these three variations, and we would urge that one of them be chosen.

GI2-4 However, if it should happen that none of the above variations are chosen, then we are left to confront the lesser of three evils. We continue to oppose the original route proposal because of its path through pristine environment near the trails and because it comes much too close to the South Pass Summit and to the Pacific Springs area. We also have concern about the crossing of the main trail itself south of the Pacific Springs area.

GI2-5 The "Route 28 Variation" retains all of the disadvantages of the "proposed" route and makes things even worse by plowing through more historic areas. This variation does not seem to offer any advantages, and we urge its rejection.

The realignment of the "proposed route", as suggested by FERC staff on page 4H-7, represents, as we have previously stated, a significant improvement over the original "proposed route". It moves farther away from the summit and from Pacific Springs, it avoids a disturbing crossing of the main trail by boring at the same location as the existing highway crossing. However it retains all of the other problems of the original proposed route.

GI2-6 In summary: (1) We urge that the pipeline not be routed through the South Pass area. (2) If we fail in that request, then we would prefer the FERC staff modification of the proposed route to the remaining alternatives.

Thank you for providing this opportunity for comment.

Ronald R. Lund
Ronald R. Lund
President, Wyoming Chapter of OCTA

GI2-3 Comment noted.

GI2-4 See Response to Comment GI2-2 above.

GI2-5 We agree that this variation should be rejected.

GI2-6 Thank you for your comments. The "FERC staff modification" was adopted by Altamont in November 1990, and is now the proposed route.

FEBRUARY 26, 1991

My name is Larry Means; I live in Lander, Wyoming, and am a member of the Audubon Council of Wyoming

The Audubon Council of Wyoming is a representative organization of some 1200 members of the National Audubon Society in Wyoming.

At this time, I will limit my comments to vegetative and riparian considerations as stated in the DEIS.

The document is very poorly laid out. Much of the information considers both lines, and various alternatives. It is very difficult to identify specific information. Also, some data is absent or extremely minimal for alternative routes. It is also obvious that sections relating to soils are minimal and in some cases, mis-stated. As an example, the South Pass route will require much more blasting than stated in the DEIS. I doubt if cores of any type were
GI3-1 taken on this variation. Additionally, how and where will the rock debris from the South Pass route be disposed of and where will the fill and topsoil come from for the filling of the trench?

In your descriptions of soils, streams, and vegetative types that will be crossed, you use 'range land' and 'agricultural land' in an inconsistent manner. In some cases a reader not familiar with the terrain would assume that there is agricultural land in the South Pass area.

GI3-2 The Jeffrey City Alternative was not studied so intensively as the Preferred Alternative. Much more data is necessary on soils and vegetation before an informed decision on the best alternative can be made.

GI3-3 BLM, in their comments during the administrative period of writing the DEIS, provided a wealth of information to FERC on stream crossings, soils

(continued)

(Larry Means)

GI3-1 Spoil (including rock) removed from the trench would be returned to the trench. Topsoil would not be used to fill the trench, but returned as the surface layer. Excess rock would be hauled away to a pre-approved disposal site. See revisions to Chapter 4B and new Appendix B-5.

GI3-2 We disagree. Within the limits of the data available during our analysis, all of the routes under consideration were subjected to the same level of scrutiny.

GI3-3 We disagree. No information provided by the BLM has been ignored. All constructive comments and suggestions provided have been considered, and where possible, incorporated into the EIS. Please see Page 2 of the BLM's comment letter on the DEIS which states

Page Two

GI3-3 vegetative types, reseeding rates, types of plants and species that should be used in revegetation and the location of existing roads that may be used for construction purposes. Much of this information was ignored in the DEIS provided for public comment. Why was this information ignored? The BLM is the land manager on the ground for most of the lands within the Public Domain and their expertise is extensive and their knowledge critical to the success of this project.

Our recommendations are as follow:

GI3-4 1. Revise and expand the DEIS to provide equal data and information on the alternative routes for Altamont.

GI3-5 2. Re-assess the adequacy of soils information and follow through with sufficient investigations on all alternatives so that cost estimates and environmental consequences can be adequately compared for the alternatives.

GI3-6 3. The alternative selected should not be based on only cost

GI3-7 considerations. The adverse visual impacts (short and long term) in an area such as South Pass should be avoided. The alternative selected should cross

GI3-8 a minimum of streams and wetland areas (The Jeffrey City Alternative).

GI3-9 And, finally, the revegetation of the land areas disturbed should be restored to as natural a condition as possible. Forbs, brush, and native grasses must be used in the reseeding mix.

GI3-10 In conclusion, we recommend the Jeffrey City Alternative and we feel that if you follow our suggestions you, too, will come to the conclusion that this is the most logical and preferred route.

GI3-3 Cont'd "... your willingness to consider BLM proposed alternatives and to utilize BLM data and plans in developing this EIS go a long way towards making the EIS a document this agency can utilize in its own decision process."

GI3-4 See response to Comment GI3-2 above.

GI3-5 We have re-analyzed the raw soils data which was summarized in the DEIS and revised our assessment. See Chapter 4B, Table S-4 and 6-3, and new Appendix B-4. Cost information for the route variations was presented in DEIS Chapter 2. Additional cost information has been included in the FEIS.

GI3-6 We agree that alternatives selection should not be based on cost alone.

GI3-7 Altamont has now refined much of its proposed mitigation for the South Pass area (see Chapter 4B and new Appendix B-5). We have determined that implementation of these measures, in conjunction with other recommendations and Altamont's route realignments, would reduce the resultant visual impacts in this area to less-than significant.

GI3-8 Comment noted.

GI3-9 We agree. Please see revisions to Chapter 4B and Appendix B-3.

GI3-10 Thank you for your comments.

A. Donn Kesselheim
Wyoming Outdoor Council
February 26, 1991

Draft

I wish to comment specifically on that portion of the Draft Environmental Impact Statement which deals with the South Pass preferred route and the alternatives to it.

GI4-1 It seems to me that this EIS falls short of compliance with NEPA, contrary to the statement made at page 1-14. It says that it is intended to provide the public with information regarding the environmental effects of construction, operation and maintenance, possible ways to reduce or avoid those effects, and alternatives to the proposed route. Yet, an examination of the EIS shows me that it does not provide me with the information needed for me to make an intelligent decision.

GI4-2 Let me give an example. AT page 2-7, cleanup and restoration of disturbed land in the right-of-way is discussed. And then it is said, rather obviously, that not all of the material taken out of the trench is going to fit back in with a 30-inch pipe. My question is, what is going to be done with all the rock which is going to have to be blasted and removed while constructing through the South Pass area? The Bureau of Land Management indicates that there may be 12 or more miles of rock terrain in the area directly south of Atlantic City and South Pass City. The EIS does not address this question.

GI4-3 Neither does it address another question, how is the land going to be reclaimed? The EIS does say the landscape is going to be scarred and it does say that regeneration of vegetation may not be successful and may result in significant, long-term visual impact on the area. It also says at another place that permanent impacts are those changes to the visual resource that involve areas where vegetation would not recover for the life of the project.

Let me just comment on the latter. Lack of successful reclamation in this area is very serious. This is an area of historic and recreational resources with a high potential for development of an important tourist industry.

[A.D. Kesselheim, Wyoming Outdoor Council]

GI4-1 Comment noted.

GI4-2 As stated, surplus soil would normally be evenly distributed over the right-of-way. Spoil (including rock) would be returned to the trench when the pipe is backfilled. Excess rock would be hauled away to a pre-approved disposal site, as would any non-combustible construction-generated waste. See revisions to Chapter 4B and new Appendix B-5.

GI4-3 Reclamation was addressed in DEIS Chapter 4B and in Appendix B-3. Please see our revisions to Chapter 4B and Appendix B-3, as well as our summary of Altamont's mitigation plan for the South Pass area. We believe that this plan, in conjunction with other recommendations and Altamont's route realignments, would reduce resultant visual impacts in this area to less-than-significant. Altamont's plan is presented in new Appendix B-5.

Draft 2

GI4-4	The EIS does not address another question and that is, what is the comparable impact to important historical and recreational resources on any of the alternative routes? The EIS merely says of the alternatives that there is a lack of complete and comparable information to make a comparison. To me that is inadequate for this document.	GI4-4	Chapter 4M has been substantially revised Comparable data has been gathered and is now presented.
GI4-5	In view of these discrepancies, and many more, and the lack of adequate documentation, it would seem appropriate to have a completed environmental impact statement done on the proposed South Pass route and the alternative most acceptable to Altamont. Only then will the public be able to make an informed decision.	GI4-5	Comment noted. Please see the FEIS.
GI4-6	I would remind you that the public does have a relevant and important interest here in as much as much of the land to be traversed by the pipeline is land administered for the public by the Bureau of Land Management.	GI4-6	Thank you for your comments. As a cooperating agency, the BLM has been integrally involved in preparation of the EIS. Please see the BLM's cover letter transmitting comments on the DEIS.

[Friends of Wild Wyoming Deserts]

Comments submitted at the Public Hearing

on Altamont's Proposed Natural Gas Pipeline Project

Riverton, Wyoming
February 26, 1991

My name is Lynn Kinter. I'm from Atlantic City, and I'm speaking tonight on behalf of over 100 members of the Friends of Wild Wyoming Deserts. We appreciate this chance to comment.

GI5-1 Having reviewed Altamont's Draft EIS, and field-checked parts of the various alternative routes, Desert Friends supports the Jeffrey City Alternative for this project. However, we noted many inadequacies in the Draft, and found field investigations impossible in many areas due to snow cover. Therefore, we echo the request of others for a 100-day extension on this comment period. If FERC managers are at all concerned with the public voice, they should allow us some snow-free time to look over the routes.

GI5-2 In analyzing the various alternatives, we find that the proposed route over South Pass will cause the greatest damage to historic and natural values, while the Jeffrey City route will cause the fewest impacts.

GI5-3 Specifically, on the northern part of the South Pass route, the pipeline will cross a potential wilderness unit that will likely be included in the Citizens' Wilderness Proposal for BLM Lands. The Jeffrey City route goes near, but not in, another potential wilderness unit, and we want to be sure that site is not impacted during construction.

GI5-4 Further south, the proposed pipeline passes through the South Pass Historic Area--a region that has seen comparatively few changes since the pioneer days, and is prized for its relatively undeveloped nature. To quote the Draft "The Altamont project will encounter special restoration problems in some areas. The most significant of these is the Arrow Creek area in Montana, and the South Pass area in Wyoming." Indeed, this pipeline will cause an ugly scar across the historic South Pass landscape that will probably never fade.

The most serious of these "special restoration problems" is that 94 miles of the soils on the South Pass route have poor or poor-to-fair rehabilitation potential, and BLM's soil
GI5-5 scientist says even this potential is over-rated. Once these fragile, rocky soils have been turned, they will never support vegetation that blends in with the surrounding cover. The Jeffrey City route, on the other hand, stays

GI5-1 Comment noted. On March 5, 1991, the Commission's Secretary responded to the requested 100-day extension by granting an extension until March 15, 1991.

GI5-2 We disagree. See revisions to Chapter 4M and Tables S-4 and G-3.

GI5-3 We do not believe that the proposed route's location would affect consideration of the Fuller Peak Unit. Also see later response to comment letter of Wyoming Wilderness Coalition (GI-29).

GI5-4 We are unaware of any officially-designated "South Pass Historic Area" which would be crossed by the proposed route.

GI5-5 We disagree. See revisions to Chapters 4B and 4L, as well as Appendix B-5. As reflected in DEIS Tables S-4 and G-3, the Jeffrey City Variation would temporarily disturb 2,803 acres of land, compared to 2,327 acres for the proposed route (MP 428-620).

	primarily within existing corridors and would cause much less new disturbance.		
GI5-6	Another "special restoration problem" is that the proposed route over South Pass crosses 36.5 miles of wetland, 18 perennial streams--8 of which are important recreational fisheries, and 2 bodies of water that have contaminated sediments. The Jeffrey City route crosses 28.6 miles of wetlands, 7 perennial streams, 2 important fisheries, and no contaminated bodies of water. I'll remind you that "crossing" means using blasting and mechanical rippers in the rocky streams over South Pass, while a backhoe can likely do most of the work on the Jeffrey City alternative. Clearly, the Jeffrey City alternative is much less harmful to surface water, and more in line with President Bush's recent call for protection of wetlands.	GI5-6	The EIS represents wetland crossings in terms of acres, not miles. Implementation of our Stream and Wetland Construction and Mitigation Procedures would reduce impact associated with stream and wetland construction to less-than-significant. Other mitigation, such as DEIS recommendation 9, would address the issues raised in this comment.
GI5-7	Even if Altamont's contractors could completely rehabilitate the soils and streams which will be disturbed, they would still leave a trail of signposts, mainline loops, and roads used for inspection and maintenance. In the process of construction and maintenance, they will open a network of new roads and two-tracks that will also be used by other vehicles. All this will be seen on the rolling hills of South Pass, and along the Oregon Trail and Lander Road, while above-ground structures--mainline loops--will be in plan view at Willie's Handcart Site and False Parting of the Ways.	GI5-7	We disagree. No "mainline loops" of the pipeline are proposed. No permanent road along the right-of-way would be required for operation and maintenance. Only existing roads and two-tracks would be used during construction. The mainline block valves proposed for MP 515.5 and 532.7 would not be visible from either of the referenced features. Please see revised Chapter 4L and Appendix B-5.
GI5-8	Despite the fact that roads are already established for construction and maintenance along the Jeffrey City route, Altamont proposed building a new corridor--which will then be open for others to follow. BLM designated the Jeffrey City corridor that runs across the desert with the idea that other pipelines would follow there, and not ruin additional lands. And the Lander Resource Management Plan (page 49) states "When locating major utility systems, the South Pass Management Unit will be avoided. Yet FERC and Altamont are proposing to override the conscientious directives of the BLM.	GI5-8	Altamont has not proposed a new utility corridor, nor has the BLM indicated any interest in designating a utility corridor in the South Pass area. Please see new material added to Chapter 5.

In summary, Altamont claims the pipeline will not impact the primarily natural character of South Pass, and plainly that is not the case. Evidently, Altamont executives are willing to mar the nationally important South Pass region for what they believe will be an economic advantage. But they have not counted the spiritual and intrinsic costs to those of us who love that land and call it home. Thank you.

Submitted by Lynn Kinter

Lynn Kinter, Director
Friends of Wild Wyoming Deserts
Route 62 Box 128
Atlantic City, Wyoming 82520

Friends of Wild Wyoming Deserts
Route 62 Box 12E
Atlantic City, Wyoming 82520
(phone: 307-332-7031)
February 28, 1991

91 [illegible] 11 PM 3:50

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Ms. Cashell:

Please accept these comments pertaining to the PGT/PG&E and *Altamont Pipeline Projects Draft Environmental Impact Statement*, January 1991 (Docket Nos. CP89-460-000) and CP90-1375-000).

GI5-9 Having reviewed Altamont's Draft EIS, and field-checked parts of the various alternative routes, Desert Friends supports the Jeffrey City Alternative for this project. However, we noted great deficiencies in the Draft, and found field investigations impossible in many areas due to snow cover. Therefore, we echo the request of others for a 100-day extension on this comment period. If FERC managers are at all concerned with the public voice, they should allow us some snow-free time to look over the route.

In analyzing the various alternatives, we find that Altamont's proposed route over South Pass will cause the greatest damage to historic and natural values, while the Jeffrey City route will cause the fewest impacts. The Draft states (pg. 6-27) that the proposed route has the potential for significant, long-term adverse impact to the South Pass area. GI5-10 Comments we obtained from Lander and Green River Resource Area BLM officials under the Freedom of Information Act show that the local administrators also agree (see copies enclosed). GI5-11 Therefore, we believe that a 'Finding of No Significant Impact' for the proposed route would be an erroneous conclusion, and that FERC should not proceed in permitting this alternative.

GI5-12 Specifically, the proposed pipeline passes through the South Pass Historic Area, crosses the Oregon Trail and its branch--Lander Road, and goes by a number of important historic landmarks. This region has seen comparatively few changes since the pioneer days, and is prized for its relatively undeveloped nature. A good portion of the local economy is dependant on tourists who come to see 'what America once was'. Yet Altamont, in downplaying viable alternatives, will damage our 'capital' for the purpose of shipping Canadian gas to California.

GI5-9 See response to Comment GI5-1.

GI5-10 BLM comments on preliminary drafts of the DEIS will not be responded to in this FEIS. As stated on Page 3 of the BLM letter of comment on the DEIS "Previously related BLM comments or those dealing with early internal reviews can either be assumed to be resolved or of a nature that BLM will deal with in its review and approval of the POD...".

GI5-11 Comment noted.

GI5-12 See response to Comment GI5-4.

GI5-13 The Draft EIS states (pg. 6-25) that the South Pass alternative will have 91.2 miles of high or moderate visual impact, while the Jeffrey City Alternative will have such an impact on only 0.4 miles. Because visual resources, along with historic sites, are the primary attraction for tourists and recreationists, we believe the visual impact factor alone should disqualify the South Pass route.

To quote the Draft (pg. 4B-10) "The Altamont project will
encounter special restoration problems in some areas. The
most significant of these is the Arrow Creek area in Montana,
GI5-14 and the South Pass area in Wyoming." Indeed, this pipeline
will cause an ugly scar across the historic South Pass
landscape that will probably never fade.

GI5-15 The most serious of these "special restoration problems" is that 94 miles of the soils on the South Pass route have poor or poor-to-fair rehabilitation potential, and BLM's soil scientist admits this potential is over-rated. Once these fragile, rocky soils have been turned, they will never support vegetation that blends in with the surrounding cover. The Jeffrey City route, on the other hand, stays primarily in the corridors of already-established pipelines.

GI5-16 Another "special restoration problem", according to the Draft (pp. S-26 & 27) is that the proposed route over South Pass crosses 36.5 miles of wetland, 18 perennial streams--6 of which are important recreational fisheries, and 2 bodies of water which have contaminated sediments. The Jeffrey City route crosses 28.6 miles of wetlands, 7 perennial streams, 2 important fisheries, and no contaminated bodies of water. "Crossing" means using blasting and mechanical rippers in the rocky streams over South Pass, while a backhoe can likely do most of the work on the Jeffrey City route. Clearly, the latter alternative is much less harmful to surface water, and more in line with President Bush's recent call for protection of wetlands.

GI5-17 Even if Altamont's contractors could completely rehabilitate the streams and soils which will be disturbed, they would still leave a trail of signposts, mainline loops, and roads used for inspection and maintenance. Construction and the required periodic maintenance will open a network of new roads and two-tracks that will also be used by other vehicles. All this will be seen on the rolling hills of South Pass, and along the Oregon Trail and Lander Road, while mainline loops--above ground structures--will be in plain view at Willie's Handcart Site and False Parting of the Ways.

GI5-18 Despite the fact that roads are already established for construction and maintenance along the Jeffrey City route, Altamont is proposing a new corridor--which will then be open for others to follow. BLM designated the Jeffrey City corridor that runs across the desert with the idea that other

GI5-13 Altamont's November 1990 realignment and further analysis have reduced the miles of high or moderate visual impact along the proposed route between MPs 428-620 to 30.8. Mitigation proposed by Altamont or recommended in the FEIS would reduce visual impact at these locations to less-than-significant levels.

GI5-14 We disagree. See response to previous comment.

GI5-15 We disagree. See response to Comment GI5-5.

GI5-16 See response to comment GI5-6.

GI5-17 We disagree. See response to Comment GI5-7.

GI5-18 See response to Comment GI5-8.

GI5-18 (cont.)	pipelines would follow there and not ruin additional lands. And the Lander Resource Management Plan (June 1987; pg. 49) states "When locating major utility systems, the South Pass Management Unit will be avoided." Yet FERC and Altamont are proposing to override the conscientious directives of BLM.		
GI5-19	On page S-19, the Draft claims that the pipeline over South Pass crosses no potentially active faults; on page S-21, it states that data is inconclusive regarding activity on the two fault systems crossed by the South Pass route. In fact, an earthquake at South Pass City a few years ago opened a fissure in the earth, and was strong enough to throw a neighbor of mine out of his bed. Consultation with an independent geologist, and review of aerial photographs and geologic maps, indicate recent movement along a major thrust fault--the Continental Fault--near pipeline mile 534, where the pipeline crosses and parallels the Oregon Trail. Any construction through the South Pass region, and in this area in particular, should have maximum protection from seismic disturbance. Ideally, the Jeffrey City alternative would be used instead--faults there have been inactive for a much longer time period than has the Continental fault.	GI5-19	Thank you for this information. We believe that our analysis fairly represents the potential geologic hazards associated with construction along any of the routes considered between the Lost Cabin and Opal areas. Mitigation recommended in the DEIS and revised in the FEIS would reduce any hazards to less-than-significant levels.
GI5-20	Little of the proposed route has been studied for archeologic features, yet a single literature search showed 193 historic and prehistoric sites within 100 feet of the pipeline. Clearly, South Pass is an area rich in cultural sites and artifacts. It is also tremendously important to Shoshone and other Native Americans for spiritual reasons. Inexcusably, the Draft's entire coverage of Native American concerns that will be affected (pg. 3M-13) is limited to two sentences--both referring to Crow land in Montana. Therefore, before permits are issued for any alternative, Altamont should consult with Shoshone and Arapahoe tribal members, include them in field surveys as they see necessary, and avoid any region they define as important and sensitive.	GI5-20	Consultation with the Shoshone and the Arapahoe was in progress when the DEIS was issued. Interested Indian tribes would be invited to participate in any field surveys conducted. See revised Chapters 3M and 4M.
GI5-21	As a member organization of the Wyoming Wilderness Coalition, we want to make sure that the pipeline avoids any area that will be proposed for Wilderness designation in the Conservationists' Wilderness Proposal for BLM lands. Specifically, on the northern part of the South Pass Route, the pipeline is slated to cross Fuller Peak Proposed Wilderness Unit--this line should be rerouted about a thousand yards to the east, into the existing utility corridor, where it will be outside of our unit's boundary. The Jeffrey City route goes near, but not in, the Lysite Badlands Proposed Wilderness Unit, and we want that area to be protected from impacts during construction.	GI5-21	See response to Comments GI5-3.
GI5-22	According to the DEIS (pg. 4E-60), there are four Wyoming plant species designated as Threatened or Endangered which could be affected by the project. Although Table 4E-13 is cited, the names of these four species do not appear there,	GI5-22	Comments accepted. Please see revisions to Chapter 4E and Appendix E-4.

GI5-22 (cont.) not anywhere else in the document. only candidate species are listed. Also, on page 4E-59, thirteen species are classified under the Natural Heritage Program, but the code (i.e. G3.S3) is not explained or defined. What does this mean?

GI5-23 FERC's Recommended Mitigation Measure #59 (pg. 6-39) states that Altamont must survey for the occurrence of certain special-status plant species, and realign its route to minimize disturbance to these species. Our organization requests field reports from Altamont which document thorough floristic surveys along the route in Wyoming. Several of us would also like to accompany the botanist(s) who completes the surveys for some or all of the route. Please contact me before the inventory begins.

GI5-24 On page 4E-61, the DEIS states that Allen's thirteen-lined ground squirrel--a Threatened and Endangered Candidate species--may be found in the Bighorn Basin, and that construction could disturb 303 acres of potential habitat. However, Allen's thirteen-lined ground squirrels have been trapped near Miners Delight townsite and are likely found along other sections of South Pass route, and possibly along the alternative routes. According to the Draft, construction in the ground squirrel habitat could result in direct mortality and temporary loss of habitat. Therefore, Altamont should conduct a thorough survey for this species and reroute the pipeline to avoid its habitat. Desert Friends requests the reports from these field surveys, as well.

GI5-25 In summary, Altamont claims the pipeline will not impact the primarily natural character of South Pass; and plainly this is not the case. BLM personnel with jurisdiction in this region have indicated that there will be major resource conflicts with the proposed route over South Pass, and that the preferred route for the Altamont pipeline is the Jeffrey City alternative. Evidently, Altamont executives are willing to mar the nationally important South Pass region for what they believe will be their economic advantage. But they have not counted the spiritual and intrinsic costs to those of us who love this land and call it home. Thank you.

Most sincerely,

Lynn Kinter Tom Peters
Lynn Kinter and Tom Peters
Director Special Projects

cc: Senator Malcolm Wallop
Senator Alan Simpson
Manuel Lujan, Secretary of the Interior
Laurence J. Sauter, FERC Environmental Project Manager
Jack Kelly, Lander Resource Area Manager
Bill LeBarron, Green River Resource Area Manager
Jim Roseberry, Worland District Environmental Coordinator
Alan Edwards and Rod Miller, State Planning Coordinators
Stephanie Kessler, Wyo. Outdoor Counc. Executive Director
Larry Mehlhaff, Northern Great Plains Sierra Club Rep.

GI5-23 We will pass this request along to the project sponsor.

GI5-24 Thank you for this information. The analysis in the FEIS results in the same conclusion as was presented in the DEIS: impact to this species would not be significant. See revised Chapter 4E and the significance criteria presented there.

GI5-25 We disagree. See Pages 1 through 3 of the BLM letter of comment on the DEIS (FA12).

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ALTAMONT PROJECT REVIEW CONSOLIDATION FORM

ADMINISTRATIVE REVIEW DRAFT

DECEMBER 1990

Reviewing Office: Rock Springs District

Page	Para	Line	Comment
GENERAL			Except for specific areas noted, the PDEIS on the Altamont proposal is considered to adequately address impacts as they pertain to the major issues and concerns associated with the proposal.
			We assume that a summary will be provided in the front of the DEIS (43 CFR 1502.12). The summary should include, in addition to major conclusions and areas of controversy, identification of the cooperating agencies, their specific responsibilities with regard to the ultimate decisions on pipeline system approval and right-of-way route selection and approval. It should also include FERC's preferred alternative(s) from a systems perspective and BLM's preferred alternative(s) from a public land management perspective (43 CFR 1502.14 (e)).
			The Rock Springs District's preferred route for the Altamont pipeline is either the Jeffrey City or Alkali Butte Variation. This route would follow an existing corridor and therefor comply most closely with Bureau policy; it would avoid visually sensitive areas; avoid the most sensitive areas of historic and cultural value; it would result in reduced time needed to process cultural and T/E species clearances since the route has been extensively inventoried for previous pipelines. ✓
SPECIFIC			
1-1	2	-	The BLM is a cooperating agency. This should be identified here.
2-1	3	3	Add: ...pipeline trenches, pipe installation and backfilling, pipeline marking, and final cleanup, restoration and revegetation...
2-4T	3	3	Typo: ...the BLM and others have identified...
2-5T	4	2	...13 miles east of Farson...

GI-16

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
125 Sunflower
Lander WY 82520

TAKE PRIDE IN AMERICA

RECEIVED

IN REPLY REFER TO:

2880 (ALT)

December 14, 1990

Memorandum

To: District Manager, Worland
ATTN: Jim Roseberry

From: Area Manager, Lander

Subject: Administrative Review of the Draft Environmental Impact Statement - Altamont Project

We have completed what review we could in the limited time allowed. The attached specific comments reveal that the Draft does not adequately assess the potential adverse impacts of the proposed Altamont route and South Pass Route Variations. The incomplete analysis and inaccuracies in the present preliminary draft would not provide for informed public review and agency decisionmaking.

Hopefully, more complete review will be possible on a more complete document when the revised Draft is formally published and distributed for public review.

Jack Kelly

My name is Todd Guenther, I reside at South Pass City (Rt. 62 Box 164, SPC, WYO. 82520). I have been involved in identifying, planning for, and managing cultural resources in Wyoming for eleven years. It seems to me that the proposed Altamont pipeline presents all concerned parties with a situation in which everyone could come out winners, but only if Altamont takes an alternate to the South Pass route.

There have been some attempts to polarize this issue and characterize anyone not blindly supportive of Altamont and its use of the South Pass route as an environmentalist who opposes progress. These are simply knee-jerk reactions from people lost in an earlier decade. No modern environmentalist could oppose a project which will supply one of the nation's largest markets with a source of clean fuel. To reiterate, it is only the proposed route across the South Pass area which I oppose.

GI6-1 The South Pass area, including the Oregon Trail and related
sites, and the mining district which extends southeast beyond
Lewiston, will be severely impacted by the pipeline. Because these
areas are so unarguably significant to the history of the State and
GI6-2 the nation, they should be avoided. Indeed, the BLM says as much
in its South Pass Management Unit plan. Why is that being ignored?
GI6-3 Altamont should not be permitted to bisect this region by
pioneering a new, 20 mile long utility corridor through the heart
of this area. Company officials justify their route saying that
other roads, a railroad, and power lines have already intruded, but
do not mention that these impacts are on the periphery. They are
not part of what a study funded by the Wyoming Legislature has
called "the essential setting" which must remain undisturbed if we
are to develop the tourism potential of the area. Currently some
30,000 to 40,000 people per year visit South Pass City alone. When
other sites are developed, it is estimated that those figures will
increase to 150,000 and have a $35 million annual impact on Fremont
County. What Altamont offers us pales by comparison.

GI6-4 If this area is to be developed for tourism, which unlike Altamont, will provide jobs in Fremont County for our children, the landscape around South Pass must be preserved, from this and other

[Todd Guenther]

GI6-1 We disagree. Please see Chapters 3, 4 and 6 of the FEIS.

GI6-2 The proposed route does not cross the BLM's South Pass Management Unit.

GI6-3 See response to Comment GI5-8.

GI6-4 See previous response.

GI-18

GI6-4 (cont.) utilities that would soon use any new corridor. We do not wish to prohibit the line, we only ask that Altamont use a less historically significant and already existing pipeline corridor such as that near Jeffrey City in Fremont County and leave us the undisturbed cultural resources at South Pass so we may pursue additional avenues of economic development.

GI6-5 After studying the data, I do not believe that the Jeffrey City alternate would be more costly to build than the South Pass route which would require 13 miles of blasting through solid rock. The alternate route would also result in far fewer stream crossings and other similar impacts to the natural environment. Even if the alternate did cost more, Altamont should bear the expense. Fremont County should not be expected to shoulder the cost of that construction by losing revenue generated in the pristine South Pass country to interests from other states and nations. Building the pipeline on an alternate route would still allow Altamont to make a profit and provide California with the gas it needs, provide tax revenues to Fremont County, and allow continued tourism development in the South Pass area.

GI6-6 Altamont's local claims that they will restore their huge, 100 foot right of way to near natural conditions are a contemptible falsehood, or made out of ignorance. The South Pass environment is not amenable to revegetation. Altamont would leave a tremendous scar on the landscape that would last for centuries. The DEIS prepared for them as much as admits this (S-18, 4B-10, 4L-9). The DEIS glosses over how Altamont would deal with restoration (2-7). Tourists will not come to see pipeline scars, they want to see ghost towns, pony express stations, and the like. Altamont would drive away one of Fremont County's primary sources of income.

GI6-7 The DEIS also says, in a snow job challenging a South Pass blizzard, that no new roads would be required to access the right of way (4J-2). This is a ridiculous assertion. The heavy equipment needed to build the pipeline could not traverse the jeep and game trails now existing in that country. What is now a beautiful, unspoiled landscape admired by people from around the world will be covered with large roads and transformed into a

GI6-5 We disagree. Information presented in Chapter 2 clearly identifies that this variation would require 39 miles of additional pipe and an additional compressor station. Additional cost information for the South Pass Route Variations has been included in Chapter 2.

GI6-6 We disagree. Please see revised Chapters 4B and 4L, as well as Appendix B-5. Impact to tourism would be negligible.

GI6-7 Thank you for your opinion.

spoiled waste by Altamont.

In conclusion, the South Pass area should be avoided. Furthermore, there are inaccuracies and serious inadequacies in the DEIS which need to be addressed. This document needs to be redone, or a supplemental impact statement dealing with the South Pass route and its alternatives should be required. Finally, the regulations set down in the National Environmental Policy Act, which do not appear to be receiving due consideration at this time, need to be followed.

Comments of Loren Jost
Representing the Fremont County Historical Preservation Commission

My name is Loren Jost and I'm here to speak as the representative of the Fremont County Historical Preservation Commission.

The commission is a group of county citizens appointed by the Board of County Commissioners to seek out areas of historical importance and to take action to help preserve areas which have long-lasting significance. Therefore we have followed closely the planning of the Altamont project and have voted unanimously in opposition to the company's proposed route through South Pass.

The historic importance of the South Pass area is unquestionable. The draft EIS acknowledges that importance as being national in scope. Yet the EIS shows clearly that Altamont has attached little importance to the impact of its project on cultural resources and has interpreted the term "impact" in the narrowest way possible.

GI7-1 To this date, Altamont's examination of cultural resource impact is limited to a review of literature and maps. To minimize the potential impact of the project, the EIS points out how Altamont's route avoids identified monuments and sites. Yet the draft EIS states clearly that examination of adverse effects must include those effects which diminish the integrity of a resource's "setting, . . . feeling, or association." No consideration of such effects seems to have occurred in the EIS. We submit that the cultural significance of South Pass goes far beyond the narrow boundaries of historic sites and monuments. In fact, it is the natural setting, the
GI7-2 undisturbed feeling of the area that gives true meaning to the monuments and sites which Altamont seeks to avoid. We believe the impact of blasting, roads, and other construction factors has been drastically understated in the EIS. And we doubt that those factors can be mitigated through special construction procedures or an unproven reclamation plan.

GI7-3 With regard to cultural resources which may have particular significance to Native Americans, the draft EIS merely notes that the proposed route traverses no Indian reservations. There is no mention that the South Pass area once was a part of the Wind River Indian Reservation and even before that was a major crossroads for Indian trails which were used extensively back into pre-history.

GI7-4 The draft EIS notes that the identification and evaluation of previously unknown cultural resources is not yet underway. We submit that this portion of the project should have been completed by now. We fear that the process by which the South Pass Route moves towards approval might advance so far that discovery of additional cultural sites prior to construction—no matter how significant—might be addressed only through some type of mitigation that is far less acceptable than the re-routing of the pipeline.

GI7-5 We note that Altamont's proposed South Pass Route has been adjusted to avoid an area surrounding the South Pass Summit which has been designated as a National Historic Landscape. The boundaries of the area were defined in 1966, but in 1884 and 1985 it was determined that a reassessment of those boundaries should be undertaken. That reassessment has not been completed and so the boundaries of the NHL area remain indefinite. Altamont has responded by realigning its route to avoid the 1966 boundaries. We would argue that approval of Altamont's proposed route now would preclude any extension of the NHL boundaries, no matter how appropriate such an extension might be. We believe the South Pass area is far too important to allow that to happen.

GI7-6 We also note the complete inadequacy of this draft EIS with regards to an assessment of the impact on cultural resources along the alternative routes. We wonder how any reasonable comparison of the impacts on cultural resources can be made without substantially more work in this area. And we question the validity of any decision without the facts to make such comparisons.

GI7-7 Another area of concern is the potential of the Altamont Project for adverse cumulative impacts. Within the past few days Altamont spokesmen have been busy telling the public that their project is only a single pipeline, and that there is no reason to believe that its construction

[Loren Jost, Fremont County Historical Preservation Commission]

GI7-1	Significant progress has been made in the Section 106 compliance process since the DEIS was printed. See revised Chapters 3M and 4M.
GI7-2	Thank you for your comment. See revised Chapters 4B and 4L, and Appendix B-5.
GI7-3	Comment noted. See revised Chapters 3M and 4M.
GI7-4	The Section 106 compliance process is well under way. While it may be desirable to present the conclusions of this process in the EIS, this rarely occurs for major interstate pipeline projects and, in fact, is not required either by NEPA or the NHPA.
GI7-5	Thank you for your comment. Please see new information included in Chapter 4M.
GI7-6	See previous response.
GI7-7	Thank you for your comment. Please see new material added to the cumulative impacts discussion in Chapter 5.

GI7-7 (cont.) would lead to the construction of other pipelines through the South Pass area But in the draft EIS, the South Pass route is justified by existence of a power line, a railroad grade, and a buried fiber optic cable which already traverse a portion of the area. It's difficult to reconcile these two arguments.

The fact is that Altamont's proposed South Pass Route would establish a new right-of-way through a 25-mile stretch of South Pass Altamont has already demonstrated that future proposed projects would use that right-of-way to justify additional future construction.

We believe that cumulative impacts brought on by this project argue strongly in favor of use of an existing utility corridor That corridor is the Jeffrey City Alternative.

We believe that an appropriate interpretation of this project's impact on cultural resources argues in favor of any route *but* the South Pass route.

Riverton, Wyoming
February 26, 1991

Statement on Altamont pipeline draft environmental impact statement

I am Lavinis Dobler of Riverton, Wyoming. I am the president of Friends of South Pass, an organization with 124 members. Friends of South Pass was founded in 1976 in order to promote and protect the historical and cultural values of the South Pass area.

G18-1 We are greatly dismayed at the prospect of a pipeline being put through the South Pass area. We feel this would not only create great damage to the landscape but would also establish an industrial corridor which would utterly destroy the integrity of this great historic area. The pipeline is just not compatible with the historic, cultural, and recreational values.

G18-2 A $~~30~~40,000 study which was done for the State of Wyoming resulted in the South Pass Heritage Area Master Plan. That plan says at page 125, "A major pipeline affecting the existing resources and the proposed major attraction seems incompatible with the recommended tourism effort and the goal of historic preservation."

G18-3 The draft environmental impact statement says at page 4D-12, "The Lander Bureau of Land Management Resource Area Management Plan identifies the South Pass Management Unit as an avoidance area for major utility systems in order to protect the historic and cultural values of the area. This route would be in conflict with the BLM's management plan and is, therefore, considered a significant land use impact." The Bureau of Land Management has identified an alternative

G18-4 route through Jeffrey City. Does the BLM plan identify any historic areas that should be avoided on the alternative route?

G18-5 At page 4L-9, the EIS says of the South Pass area, "Although the proposed pipeline would cross open rangeland, the impacts on vegetation would be long-term. Construction of the pipeline would create a scar on the landscape." How do you propose to mitigate a scar on the landscape that will be there 100 years from now?

[Lavinis Dobler, Friends of South Pass]

G18-1 Thank you for your comments. Please see revised Chapters 4B, 4L and 5, as well as new Appendix B-5.

G18-2 This plan goes on to state "Admittedly, it is not clear at this time what those potential impacts [to sites such as Fort Stambaugh, the Miners Delight-Atlantic City-South Pass City mining area and the Emigrant trails] might be...". We feel that the FEIS clearly fills the information gap identified in the referenced study.

G18-3 This factor is one of the disadvantages associated with the Route 28 Variation. The proposed route avoids the South Pass Management Unit.

G18-4 Beyond the South Pass Management Unit on the Route 28 Variation, we have no information regarding proposed historic areas for any of the other routes under consideration.

G18-5 Comment noted. A site-specific restoration plan has been developed for the South Pass area. We have determined that its implementation, in conjunction with route refinements adopted in November 1990, would reduce the resultant visual impacts on this area to less-than-significant levels. See revised Chapter 4B and Appendix B-5.

GI8-6 The EIS at page 4M-5 says, "At this time, the National Register of Historic Places does not have confirmed boundaries for the National Historic Landmark." This means the area around and adjacent to the site of The South Pass, the actual crossing of the Continental Divide. How are we to know if the pipeline would indeed violate a National Historic Landmark?

GI8-7 Finally, at page 4M-8, the EIS says, "Due to lack of complete and comparable information for the proposed and alternative routes,it is not possible to perform an objective/equitable empirical comparison at this time." If the information was not available to make a valid comparison between the routes, why was this EIS brought out now?

GI8-8 I find these statements very disturbing. This is the only time I get to comment on this project and I am given comments such as the above. I don't believe this is what the law, the National Environmental Policy Act, requires. I request that another environmental impact statement be done which would answer my questions and give me more clearcut information about both the Altamont route and the BLM Jeffrey City alternative.

Lavinia Dobler
1154 Hilltop Lane.
Riverton, Wy 82501

GI8-6 Comment noted. Please see new information presented in Chapter 4M.

GI8-7 Comparable data for this single resource area was identified as lacking in the DEIS. These data have now been collected and are presented in our revised Chapter 3M and 4M.

GI8-8 Thank you for your comments.

[Thomas A. Bell]

Tom Bell
Lander, Wyoming
February 26, 1991

Altamont pipeline project, Riverton hearing

GI9-1 I am grieved that we are even here this evening to talk about the possible desecration of a national historic shrine. If the Altamont pipeline is allowed to go through the South Pass area, the physical atmosphere of the place will be forever changed. Another historic site will have been sacrificed to the almighty dollar.

The subject at hand is the draft environmental impact statement. I speak only to that part which concerns the South Pass proposed GI9-2 route as opposed to the Jeffrey City alternative. I find that it is of little use in defining the real advantages and disadvantages of the proposed route over the alternative. No one could take this document and make an informed decision as to which route would be better from almost any aspect.

GI9-3 The document is honest enough to say of the South Pass area that impacts on vegetation would be long-term and that construction of the pipeline would create a scar on the landscape. It tells us that adequate revegetation "may take years" because of minimal rainfall. (S-18) It notes in several sections that impacts would be significant. (4L-9)

GI9-4 Lip service is given to so-called mitigation of visual impact where the pipeline would parallel the main Oregon Trail. But nowhere can I find in the EIS what happens when the pipeline crosses the Lander Road in Section 8, T28N, R100W. That branch of the Oregon Trail is considered by some historians to be every bit as important as other major variations.

GI9-5 The EIS casually treats clean-up and restoration of the right-of-way and says, "Because the pipe displaces a portion of excavated material, not all of the material removed can be returned to the trench." (2-7) Nowhere in the EIS do I read about the disposal of all the rock which will be removed from the trench from approximately milepost 515 (Rock Creek) to milepost 527 (near the Sweetwater River). This stretch is nearly pure rock which I am sure will pose special construction problems.

GI9-1 Comment noted.

GI9-2 We disagree. We believe that the information and data presented in the EIS is more than adequate for a comparison of environmental impact associated with the five routes reviewed between the Lost Cabin and Opal area.

GI9-3 Thank you for your comments.

GI9-4 DEIS Chapter 4M identified mitigation options for sites eligible for the NRHP.

GI9-5 See response to Comments GI4-2.

Where will the rock go and where will enough replacement material be
GI9-6 found to replace it? The EIS inadequately treats the stretch of
country in this critical area which has, as the EIS puts it, "poor
rehabilitation potential." (4B-10) It does say, in regard to soils
and climate, "These restrictive features would limit successful regeneration
of vegetation and may result in significant, long-term visual
impact on the area." I think the verb may should be changed to will.
This area is within the viewscape of the main Oregon Trail and, as
noted above, crosses the Lander Road.

GI9-7 The EIS states (4J-2) that, "Altamont indicates. . .no new roads
would be required to access the proposed right-of-way. . ." I challenge
that statement. From my knowledge of the countryside and the terrain
from Twin Creek to the county road between Rock Creek and Willow Creek,
there are no access roads suitable for heavy construction. There are
two-track trails suitable for 4-wheel drive vehicles but nothing to
accommodate very large trucks carrying 80-foot sticks of 30-inch steel
pipe. That piece of countryside contains some very rough terrain and
several small streams which will pose problems for construction, let
alone the problem of getting pipe to the construction area. All of that
GI9-8 area will be greatly impacted by the construction and access to it. It
is now pretty country. It won't be so pretty when Altamont finishes
with it.

GI9-9 The EIS is inadequate in comparing wildlife impacts between the proposed
route and the Jeffrey City alternative. It is somewhat like
comparing apples to oranges if stream crossings and wetland areas are
thrown in. What is not stated in the EIS is that the Jeffrey City
GI9-10 route parallels, or is in close proximity to, well designated roads
or follows existing pipeline corridors where wildlife impacts have
already taken place and where there are but two streams, the Sweetwater
River and Crooks Creek. The South Pass route would have to cross ten
streams and then the Sweetwater River, between Highway 287 and Highway
28.

The EIS itself says (4H-8), "Due to lack of complete and comparable

GI9-6	Comment noted. Please see revisions to Chapter 4B and Appendix B-5.
GI9-7	Review of USGS topographic maps, aerial photography, field investigations, and data filed by the project sponsor all support the occurrence of suitable access roads along the proposed route.
GI9-8	Thank you for your comment. Please see revised Chapter 4L for our visual impact analysis.
GI9-9	We disagree. Also see response to Comment SA16-8.
GI9-10	This information is presented in DEIS Chapters 3D and 6, and is also highlighted in DEIS Tables S-4 and G-3.

Bell 3

G19-11 information for the proposed and alternative routes, it is not possible to perform an objective/equitable empirical comparison at this time." Even though that statement is only in reference to cultural resources, it can be applied to other resource areas. And it says to me that the EIS does not adequately tell me all I need to know to make an informed
G19-12 decision. In addition, I find through the comments of Bureau of Land Management men on the ground here that they are being ignored.

G19-13 I thought federal law applied to everyone, even powerful federal agencies and their political Canadian clients. The National Environmental Policy Act is not being followed in this impact statement. Therefore, I am requesting that a supplemental impact statement be done by the Bureau of Land Management which would cover the proposed South Pass route and the Jeffrey City alternative.

G19-11 See response to Comment G18-7.

G19-12 We disagree. See response to Comment G13-3.

G19-13 We disagree. Thank you for your comments.

[Maggi Layton, Fremont County Historical Society]

ALTAMONT PIPELINE PROJECT

Wyoming

Fremont County Historical Society Feb. 26,1991

GI10-1 The Fremont County Historical Society wishes to go on record as strongly opposing the proposed Altamont pipeline route near historic South Pass area and using instead one of their alternate routes.

Representing the Society:

Maggi Layton - Vice President
Lennia Goiliher
Patti Mund
Loren Jost

GI10-1 Thank you for your comment.

[Wyoming Wildlife Federation]

*Federal Energy Regulatory Commission
*Wyoming Wildlife Federation comments on Altamont Natural Gas Pipeline Project Draft EIS.

The Wyoming Wildlife Federation's comments are directed to the proposed Altamont Project.

GIII-1 The transportation portions of the draft EIS are inadequate. Specifically, impacts of roads on wildlife have not been fully addressed. Additional analysis and mitigation measures are needed.

Page 3J-4 of the DEIS state, "The proposed pipeline would cross federal highways and state routes in Wyoming at 13 locations and active railroads at four locations. In addition, the pipeline route would cross 243 county roads." Without question, there will be new roads and two tracks resulting from this project. GIII-2 This is acknowledged on page 4E-1 of the DEIS which states, "Potential impact on vegetation and wildlife resources would result from construction and operation of either pipeline project, as well as from increased access along the right-of-way following construction."

GIII-3 Several wildlife biologists believe there are numerous important wildlife habitats along the proposed pipeline route which are already over-roaded. Many of these over-roaded wildlife habitats are on BLM lands. Given the fact that there will be new, additional roads along the route, a comprehensive transportation plan needs to be created by the BLM in order to address the impacts of excessive roading on wildlife.

GIII-4 Page 3E-34 shows that the proposed route would cross critical winter range for sage grouse, moose, deer, antelope, and other species. The number of miles of roads will increase in these areas, but no one knows to what degree BLM winter ranges are already roaded nor which winter ranges along the Altamont route are already excessively roaded.

GIII-5 Current BLM transportation plans addressing the needs of wildlife, recreationists, and other users come no where close to addressing the issue of over-roading on wildlife habitat. On Forest Service lands road density standards have been established for elk habitat. The BLM needs to establish road density standards for species such as antelope and deer.

Until the BLM develops transportation plans and establishes road density standards, a policy of no net gain of roads should be adopted.

GIII-6 Page 4E-7 states, "In order to reduce the uncontrolled use of rights-of-way, we have recommended that the applicants develop methods to screen the right-of-way from road or trail crossings, as well as establish barriers to prevent ORV use of the right-of-way." In many if not most areas, screening the right-of-way and/or prevent uncontrolled ORV use on the right-of-way will be very difficult if not impossible. Increased monitoring and patrolling by BLM personnel is needed.

During the scoping process, a request was made asking for a meaningful cumulative impacts analysis. A brief attempt was made in the DEIS to address this, but fell short of the mark. Page 4E-64 shows that 1,139 acres of year-round range for mule deer and 836 acreas of year-round range for antelope would be disturbed by

GIII-1 Thank you for your comment. No new temporary or permanent roads are proposed (except at the Wild Horse Compressor Station [No. 1] in Hill County, Montana).

GIII-2 Increased access resulting from vegetation removal is only an issue where existing vegetation precludes access, i.e., forested areas. This issue is academic along most of the proposed route.

GIII-3 See response to Comment GIII-1 above.

GIII-4 See previous response.

GIII-5 We will pass your suggestions on to the BLM.

GIII-6 The cited statement is only relevant to areas where existing vegetation effectively limits vehicle access. Much of the proposed PGT route falls into this category. This recommendation has little or no application to the Altamont proposal.

the project. An example of the questions which need to be
GI11-7 answered by a cumulative impact analysis are: 1) What were the
base number of year-round range acres available to mule deer and
antelope before wagons rumbled over South Pass in the 1850's? 2)
How many acres have been lost since then? 3) How many more acres
can we disturb before that habitat loses its value to wildlife?

These are questions and issues which need to be addressed if
we are to maintain the quality of wildlife and wildlife habitat
we so often take for granted in Wyoming. Addition work is needed
GI11-8 before the final EIS on this project is written. Congress must
appropriate sufficient money to the BLM so that the agency can
develop, carry out, and monitor the programs and plans needed to
prevent irreversible damage to wildlife habitat. We ask that the
GI11-9 Federal Energy Regulatory Commission makes sure this project is
done in a way which does not harm wildlife habitat before
allowing it to proceed.

The Wyoming Wildlife Federation will submit additional
remarks during the comment period.

GI11-7 The requested analysis is well beyond the scope of this EIS.

GI11-8 See response to Comment GI11-5 above.

GI11-9 Thank you for your comments.

WYOMING CHAPTER
SIERRA CLUB

Federal Energy Regulatory Commission February 26, 1991

Please accept the following comments on behalf of the Wyoming Chapter Sierra Club regarding the proposed Altamont natural gas pipeline project.

After reading the draft EIS, we have concerns about a number of issues that were not resolved in the document. Specifically, air and water pollution has historically been a problem that results from energy development and transport. According to the
GI12-1 DEIS, the pipeline plans to cross 92 bodies of water including 25 perennial rivers or creeks, 55 intermittent creeks or ditches and 12 ephemeral creeks along the drainages of the Clarks Fork of the Yellowstone, Shoshone, Greybull, Bighorn, Sweetwater, and Green River. The risk of a catastrophic accident that would severely degrade the present high quality of Wyoming's air and water is high. What mitigations will be made to prevent such problems?

GI12-2 As acknowledged in the cumulative impacts (chapter 5) of the DEIS, the proposed pipeline would "result in additive impacts to vegetation, wildlife and visual resources." We are especially concerned about the potential impacts that may occur on the resident raptor population. Biodiversity of the desert flora and fauna is dependent on habitat protection. Considering how the diminished habitat has already impacted other species, we feel it is reprehensible for the federal land management agencies to allow further habitat degradation

GI12-3 We are most concerned with the far-reaching longterm effects of such a large project on the more pristine areas of the Red Desert. We have submitted a proposal to the BLM to consider managing the Great Divide Basin as a National Conservation Area. Such a jurisdiction would certainly include multiple use, but would discourage such high impact projects as Altamont Pipeline or the Triton Coal Bed Methane Development. There is a high demand for non-motorized recreation, wildlife habitat protection, biological diversity, cultural and archaeological resource protection and maintenance of high quality water, air and visual resources. We have not been impressed with the BLM's ability to monitor its resources to date, and are unclear from this DEIS who will perform the monitoring plan suggested.

GI12-4 The BLM and FERC must remember that massive oil and gas development is not compatible with multiple use, since the inevitable impacts that occur preclude other resource uses.

It is obvious that this project is being fast-tracked through too quickly and should be analyzed more carefully before a decision is made. We hope you will not just rubberstamp this project as you stated in your preliminary approval, but take a close look at how best to avoid significant and irreversible environmental effects to Wyoming's values. Not only is such lack of oversight irresponsible, it is beyond the limits of the law.

Sincerely,
Meredith Taylor

"Not blind opposition to progress, but opposition to blind progress."

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[Wyoming Chapter Sierra Club]

GI12-1 Our analysis did not identify any significant risks associated with either proposal. We are unaware of how a "catastrophic accident" associated with the Altamont proposal would "severely degrade" Wyoming's air or water.

GI12-2 Thank you for your comment. Please see revisions to Chapter 4E regarding potential impact on raptors and recommended mitigation.

GI12-3 Although three of the South Pass Route Variations would cross the Red Desert/Great Divide Basin, the proposed route would avoid this area.

GI12-4 Thank you for your comments.

Wind River
Multiple Use Advocates
P.O. Box 1126, Riverton, Wyoming 82501

[Wind River Multiple Use Advocates]

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February 27, 1991

Mr. Laurence Sauter
Federal Energy Regulatory Commission
825 N. Capitol Street, NE
Washington, DC 20426

Mr. Sauter,

GI13-1 Wind River Multiple Use Advocates would like to express our support for the preferred Altamont Pipeline route through Fremont County, Wyoming.

Our position stems from the obvious care taken in avoiding direct conflicts with historical sites (Oregon Trail, Atlantic City and South Pass City) and critical winter grazing for big game animals (Red Canyon).

Our members are avid users of our Federal Lands. The conflicts which have been brought out were often due to uninformed and misinformed people spreading opinions. This was an unfortunate circumstance which lead to a split community - which still does not have all the facts.

GI13-2 The route between the Oregon Trail and historic cities of South Pass and Atlantic City allows no intrusion on tourism and viewshed; except where the pipeline approaches and crosses the Oregon Trail at the underground telephone line crossing.

GI13-3 The statements of opposition due to Wyoming gas not included within the pipeline ignores the true meaning of free enterprise. While Wyoming gas moving through would be the best scenario for Wyoming and its' residents, the reality is lost business opportunities are a fact of the free enterprise system. The industry has known for a few years the pipeline was being contemplated, studied, and organized. The industry has had opportunity to organize and approach the pipeline company. The approval of a route should not be reached due to the fact industry was unable to reach an agreement.

The route approval should stand on the environmental considerations given to the differing land forms, habitats and streams; considerations to historical sites and the careful selection avoiding such. We believe the Altamont Company has taken careful considerations for all of these factors, and therefore support the preferred route.

GI13-1 Thank you for your comments.

GI13-2 As a result of Altamont's November 1990 route realignments, this crossing is now proposed to occur approximately 1.5 miles to the southwest where Highway 28 crosses the trail.

GI13-3 Thank you for your comments.

GI13-3 (cont.)

The Altamont pipeline has a need attached to it for the economically impacted areas of Wyoming, torn by financial difficulties. These impacted areas are not limited to the area of battle occurring here in Fremont County. Washakie County is operating under poor economic conditions, and these conditions reach disaster proportions in neighboring Hot Springs County. Part of the acceptance of the plan for the Altamont pipeline must therefore consider these counties in our consideration of the project. Big Horn County is in some difficulty as well. Thus the plans developed in Fremont County must consider a negative or overly restrictive land prescription by the BLM, as damaging to all of us, and not a viable choice.

There has been much discussion about alternative routes for the Altamont line. The main point is that all these alternative lines involve South Pass. Those who wish to close down the pipeline don't want it anywhere near the historic sites. I agree, but how near is near? South Pass has been a conduit for the ebb and flow of people for many hundreds of centuries. Can you see us asking the Forest Service for a wilderness route through the Wind Rivers, perhaps through say, Wind River or Sweetwater gaps? This idea is impractical of course. Where then does the pipeline need to be for some resemblance of practicality? South Pass is the only western route possible, south of the Montana line. It is the first available route, as the Indians and the fur trappers established long ago.

Will South Pass remain a conduit for progress and expansion for the good of Wyoming? The answer is yes, now and in the foreseeable future. There can be no acceptable rerouting if the people are to have some economic resource and the financial stability and a chance to return to the viable way of life that we all have enjoyed and wish to continue to enjoy as legal residents and land owners in the state of Wyoming.

Historical sites are nice, and most of us use them. But they cannot be allowed to spread over vast tracts of Wyoming to the detriment of the state of Wyoming's future, and well being.

William G. King

William G. King, Vice President
Wind River Multiple Use Advocates

STEPHEN J. TYLER Agent
Auto-Life Health Home and Business

Post Office Box 260 153 North 4th Street Lander Wyoming 82520
Phone Off (307) 332 2540 Res (307) 332 4248

25 February 1991

Altamont Gas Project
Mr. Laurence J. Sauter, Jr.
Room 7312
Environmental Compliance Branch, OPPR
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

To Whom It May Concern:

GI14-1 I wanted to voice my opinion on the Altamont Project. After reading several newspaper articles, reviewing Altamont's information and speaking with a number of people, I support the Altamont Project.

I am very concerned about the environment. However, I see no adverse effects from this project. I do see opportunity for jobs and our economy. We need the tax base for our local economy to keep it's head above water. This tax money can help improve so many needed areas.

Thank you for this opportunity.

Sincerely

Stephen J. Tyler

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GI14-1 Thank you for your comments.

The Northern Arapaho Tribe
Office of Community and Economic Development
P.O. Box 8036, Ethete, Wyoming 82520
307-332-3060; FAX 307-332-7543

[Northern Arapaho Tribe]

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March 4, 1991

Mr. Laurence J. Sauter, Jr.
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Subject: CP89-460-001 and CP90-1375-000
Attention: Ms. Lois Cashell, Secretary

Dear Larry:

GI15-1 Thanks for talking to me on the phone about some of our mutual thoughts about the need to actively include Native Americans in the Altamont Environmental Impact Statement comment process.

Please consider these comments my formal ones to be included in the record, since I was unable to attend the public hearing in Riverton, Wyoming. Also, please file these comments when you are finished reviewing them.

Although the pipeline route through the South Pass skirts the existing boundaries of the Wind River Indian Reservation, the lands over which the pipeline extends was a part of the 1868 treaty lands and special attention must be paid toward identification of any cultural or traditional grounds and sites in the area.

The draft EIS mandates the development of a cultural resources plan as well as a throrough SHPO review. Please include my name and address on the mailing list when it comes for SNPO participation in the process.

I look forward to becoming more involved in the mechanics of the Altamont EIS process. Should you have any questions, please contact me.

Sincerely,

Alan O'Hashi
Director

GI15-1 Comments accepted. Please see changes to Chapters 3M and 4M.

Wyoming Outdoor Council

March 1, 1991

91 MAR -5 PM12:38

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RE: Docket Nos. CP89-460-001 and CP90-1375-000

Dear Ms. Cashell:

On behalf of the Wyoming Outdoor Council (WOC), I am writing to express the concerns of our membership with the PGT/PG&E and Altamont Pipeline Projects Draft Environmental Impact Statement, January 1991 (Docket Nos. CP89-460-001 and CP90-1375-000). The Wyoming Outdoor Council is Wyoming's only statewide home-grown conservation group, with over 1,000 members across the state. A significant number of our membership live in Fremont County (where our offices are based) and have a special interest in the proposed route alternatives of the Altamont pipeline through the South Pass or Jeffrey City areas of Wyoming. These written comments supplement and further explain the verbal testimony given by staff member Donn Kesselheim concerning the Altamont route at the Riverton public hearing on February 26th.

GI16-1 It has come to our attention that the Bureau of Land Management (BLM) office for the area closest to South Pass and the Jeffrey City routes (Lander Office) made extensive administrative review comments on the adequacy of the DEIS analysis of the two major routes proposed in this area. They concluded "the Draft does not adequately assess the potential adverse impacts of the proposed Altamont route and South Pass route variations. The incomplete analysis and inaccuracies in the present preliminary draft would not provide for informed public review and agency decision-making."

GI16-2 The twenty-two pages of that local BLM analysis are submitted here as part of the Outdoor Council's formal comments on the Draft EIS. We feel that these detailed and informed comments by the land managers who have extensive on-the-ground knowledge of the local area have not been heeded in the DEIS development process. Specifically, we believe GI16-3 the DEIS does not fulfill the requirements of NEPA. It is a highly generalized document with overt inaccuracies and incomplete presentation and analysis of data which appears to unfairly promote the South Pass route alternative. Specific areas in the DEIS which support these conclusion are referenced in the enclosed document.

GI16-4 Request for 100-day extension on the comment period.
The Wyoming Outdoor Council requests an extension of the public comment period for the DEIS. For a project of this size, covering numerous states and creating a utility corridor that will set a precedent for future development for many years to come, the public needs more

201 Main   Lander, WY 82520   (307) 332-7031

[Wyoming Outdoor Council]

GI16-1 See response to Comment GI5-10.

GI16-2 We disagree that BLM comments on preliminary drafts of the EIS have not been heeded in the DEIS development process, and so does the BLM. The BLM specifically states in its official DEIS comment letter: "Previously related BLM comments or those dealing with early internal reviews can either be assumed to be resolved or of a nature that BLM will deal with in its review and approval of the POD or any right-of-way grant." (Page 3, BLM letter of comment on the DEIS, dated March 8, 1991.) As a result, and because the "local BLM analysis" referenced in this comment is relevant only to a preliminary draft document and not the DEIS, these comments will not be responded to in this FEIS. We also note for the record that the commentors did not attach the 22 pages to their letter of comment.

GI16-3 We disagree with this characterization of the EIS.

GI16-4 On March 5, 1991, the Commission's Secretary responded to the requested 100-day extension by granting an extension until March 15, 1991.

GI16-5	opportunity for review and study of the DEIS. The inadequate analysis of the South Pass/Jeffrey City routes further complicates the issue. For a defensible final EIS to be written, FERC must allow more time for substantive review of the EIS. The current DEIS already reflects a hasty preparation and lack of consideration of earlier comments made by the BLM.	GI16-5	See response to Comment GI16-2.
	Specific Problems with the DEIS		
GI16-6	1) Lack of reclamation detail and accuracy for the South Pass route. Blasting through bedrock in a high altitude terrain, lack of top soil, and questions about restoration of exposed surface bedrock terrain for this route, as well as the questioned accuracy of the DEIS in portraying the soil types of the South Pass alternative - all indicate the potential for serious and underestimated adverse environmental impacts to this fragile environment.	GI16-6	We have reanalyzed the raw soils data which was summarized in the DEIS and revised our assessment. Please see revised Chapter 4B, Tables S-4 and G-3, and new Appendices B-4 and B-5.
GI16-7	2) Lack of cumulative impact analysis for the precedent-setting creation of a new utility corridor for the South Pass route. The DEIS fails to make adequate comparison between the Jeffrey City route (of which 98% follows existing utility corridors) to the new impacts for creating another pipeline corridor. Maintenance roads, the resulting future use by recreationists, and the opportunity for additional development in a newly established utility corridor were not adequately addressed. According to the BLM analysis: "Establishment of a corridor by Altamont will invite other development proposals along this corridor. It will degrade the visual and historical integrity of the area."	GI16-7	See response to Comment GI5-8. We disagree that the EIS fails to adequately compare the proposed route against the South Pass Route Variations.
GI16-8	3) Lack of adequate analysis of the affected uses of the alternate routes. The Jeffrey City route follows an established utility corridor and might affect some agricultural uses; but overall, pipeline construction would be compatible. In contrast, the South Pass alternative would greatly impact a growing tourism and recreation destination spot for Fremont County. Aside from the well known historical significant of the area, South Pass is becoming a recreational hub for the area, as both a destination for family outings and a starting place for outfitter trips to the Red Desert, rock hunters, sportsmen, and others. The DEIS fails to describe the wide difference of uses between the two routes and the resulting consequences of pipeline construction to those uses.	GI16-8	We do not believe that the proposed project would significantly affect recreation/tourism in the South Pass area beyond the season of construction. In this regard, the two routes are not significantly different.
GI16-9	4) Failure to describe and adequately address the archeological, cultural and historical features of the routes. Data is severely lacking in this area, especially for early Indian sites and artifacts. There is not enough information available for the public to accurately compare the impacts each route alternative presents in this area.	GI16-9	Comment noted. Please see revised Chapter 3L and 4L.
GI16-10	In summary, we agree with the conclusion of the BLM as stated in the enclosed administrative review: "..the EIS is a highly generalized document. The level of analysis is inadequate to evaluate, on a local basis, the impact of either the proposed action or any alternatives on the areas they would pass through. The level of analysis is not sufficient to use as a basis for the development of mitigating measures. The proposed action in particular has not been designed to "fit" the	GI16-10	We disagree. Thank you for your comments. Also see response to Comments GI5-10 and GI16-2.

landscape. rather, it is a route superimposed on the landscape without regard to the sensitivity of the area it would pass through."

Thank you for consideration of our comments.

Sincerely,

Stephanie Kessler

Stephanie Kessler
Executive Director

KOVE 1330 AM CBS Radio Network

KDLY 97.5 FM stereo

CBS RADIO NETWORK

[KOVE/KDLY Radio]

February 26, 1991

Federal Energy Regulatory Commission

Re Altamont Pipeline Hearing Riverton, Wyoming February 26, 1991

To whom it may concern:

GI17-1 The attached editorial was broadcast on radio stations KOVE and KDLY in support of the Altamont project. We endorse the project and the preferred route. Equal time was offered for dissenting opinion but was not used.

It is our belief that Altamont has addressed both the environmental and historical concerns and the company should be allowed to complete this important project.

Please include the editorial among the written comments.

Sincerely,

Joe Kenney
Owner/Manager

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ANALYSIS BRANCH

GI17-1 Thank you for your comments.

Box 430
LANDER, WYOMING
82520
307-332-5683
307-856-5607

KOVE 1330 AM CBS Radio Network
KDLY
97.5 FM
stereo
CBS RADIO NETWORK

KOVE KDLY EDITORIAL   OCTOBER 4, 1990

IT IS OUR CONTENTION THAT FREMONT COUNTY RESIDENTS HAVE BEEN THE VICTIMS OF A DELIBERATE DIS-INFORMATION CAMPAIGN REGARDING THE ALTAMONT PIPELINE. I THOUGHT SOMETHING WAS WRONG WHEN I FOUND MYSELF ON THE SAME SIDE AS THOSE RESPONSIBLE FOR THIS CAMPAIGN AT THE FIRST PUBLIC MEETING WITH ALTAMONT OFFICIALS IN LANDER LAST SPRING.

IT IS ALSO OUR CONTENTION THAT THE COUNTY COMMISSIONERS WERE HASTY IN THEIR NON-SUPPORT OF THE PROJECT AFTER ONLY HEARING ONE SIDE OF THE STORY. ALREADY, RALPH URBIGKIT HAS RECANTED HIS DECISION AGAINST THE ROUTE AND HAS PUBLICLY STATED HIS SUPPORT FOR THE PROJECT AND THE PREFERRED ROUTE I HOPE THAT THE OTHER COMMISSIONERS WILL RECONSIDER THEIR HASTY VOTE AND SUPPORT THE PROJECT AS PRESENTED.

FREMONT COUNTY WOULD BENEFIT FROM THE CONSTRUCTION OF THE PIPELINE THROUGH JOBS FROM JUNE THROUGH OCTOBER. THROUGH WORKERS ON THE PIPELINE NEEDING ROOMS, FOOD, CLOTHING, GASOLINE, AND OTHER ESSENTIALS, PLUS, A SMALL PERMANENT WORK FORCE WILL REMAIN IN FREMONT COUNTY, AND THROUGH PROPERTY TAXES ALTAMONT WILL PAY ON EVERY MILE OF PIPE IN FREMONT COUNTY.

ALTAMONT OFFICIALS HAVE PLEDGED TO BE A GOOD NEIGHBOR, THEY EVEN HAVE AN ENVIRONMENTAL CONSULTANT RESEARCHING HOW TO RE_PLANT SAGEBRUSH AND OTHER NATIVE PLANTS TO FURTHER LESSEN ANY VISUAL IMPACT THE PIPELINE MIGHT CREATE.

Box 430
LANDER, WYOMING
82520
307-332-5683
307-856-5607

GI-40

KOVE 1330 AM CBS Radio Network

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IF YOU WERE UNABLE TO VISIT THE ALTAMONT OFFICE IN LANDER A COUPLE OF WEEKS AGO, A MAP OF THE PROPOSED ROUTE IS AVAILABLE AT THE CHAMBER OF COMMERCE OFFICE AND YOU ARE INVITED AND ENCOURAGED TO STOP BY AND DECIDE FOR YOURSELF IF THE BENEFITS OF THE PIPELINE WILL OUTWEIGH THE NEGATIVES. IT'S EVEN WORTH A DRIVE OUT THERE TO SEE IF A PIPELINE THAT WILL BE BURIED, WITH TOPSOIL REPLACED AND NATIVE PLANTS IN PLACE WILL HAVE ANY MORE VISUAL IMPACT THAN THE ABANDONED US STEEL RAIL BED, OR THE HUNDREDS OF URANIUM CLAIMS THAT HAVE BEEN WORKED, OR THE COW TRAILS, JEEP ROADS, OR, FOR THAT MATTER, THE OREGON TRAIL.

IT IS OUR OPINION THAT WE SHOULD DO EVERYTHING POSSIBLE TO HELP THIS PROJECT SUCCEED. WITH THE ANNOUNCEMENT THAT THE COMPANY THAT OWNS THE MADDEN GAS FIELD IN FREMONT COUNTY IS PLANNING A $50 MILLION PROCESSING PLANT, FREMONT COUNTY COULD BENEFIT FURTHER BY GIVING THAT COMPANY A WAY TO TRANSPORT AND SELL THE NATURAL GAS FROM THAT FIELD.

IT HAS BEEN ARGUED THAT THE PIPELINE COULD HAVE A DETRIMENTAL IMPACT ON TOURISM. IN A SENSE, THE PIPELINE IS A TOURISM PROJECT. LIKE TOURISTS, THE GAS IN THE PIPELINE WILL ONLY BE PASSING THROUGH FREMONT COUNTY...AND THE COUNTY WILL ENJOY MANY OF THE SAME BENEFITS THAT ARE GENERATED BY TOURISM: TAXES, JOBS, DEVELOPMENT, AND SEVERANCE TAXES AS WYOMING GAS IS TRANSPORTED IN THE PIPELINE.

THE ONLY WAY WYOMING IS GOING TO RECOVER FROM THE DEPRESSION WE HAVE BEEN IN FOR THE PAST SIX TO EIGHT YEARS IS BY DIVERSIFYING. ANYONE WHO ARGUES THAT TOURISM IS GOING TO BE THE SAVING GRACE FOR OUR STATE JUST ISN'T BEING REALISTIC. THERE'S ONLY ONE JACKSON HOLE, AND TOURISM WILL KEEP JACKSON ALIVE. BUT THE REST OF THE STATE MUST DIVERSIFY, AND WEIGH EVERY OPPORTUNITY THAT COMES ALONG...AND IF THE GOOD OUTWEIGHS THE BAD...GO FOR IT. IT IS OUR OPINION THAT THE GOOD GENERATED BY THE ALTAMONT PIPELINE FAR OUTWEIGHS THE NEGATIVE AND WE ENCOURAGE YOUR SUPPORT FOR THE PROJECT.

Box 430
LANDER, WYOMING
82520
307-332-5683
307-856-5607

[Kent Simon]

February 25, 1991

DOCKET NUMBERS CP90-1375-000
CP89-460-001

TO: Mr. Laurance J. Sauter, Jr.
Environmental Compliance Branch, Room 7312
Federal Energy Regulatory Commission
825 North Capital Street, NE
Washington, DC 20426

RE: Comment on the PGT/PG&E and Altamont Natural Gas Pipeline Projects - Draft Environmental Impact Statement

Dear Reader,

GI18-1 By way of introduction, my name is Kent Simon and I am involved with mine land reclamation for the Wyoming State Abandoned Mine Land Program. My comments are those of myself, as a citizen of Fremont County, Wyoming and are not those of any branch of the Wyoming state government. I have been involved with many land reclamation projects throughout the state including those areas which are traversed by the proposed Altamont pipeline. As part of my position with the Abandoned Mine Land program I also prepare and review many Environmental Impact Statements.

My review of the Draft EIS for the Altamont gas pipeline showed a very adequate and well researched document. The level of detail and research that was presented in the DEIS goes well beyond that of many other EIS documents which I have seen. If this commitment to performing an excellent job follows through to the construction planning and execution, then the known and potential environmental impacts will be minimal and abated to the satisfaction of all concerned parties.

Additionally, reclamation technology is available to successfully reclaim the disturbed land through the more-sensitive South Pass areas. (Not to say there will not be any temporary visual impacts). It is not prudent to halt the progress of new projects just because previous projects were not properly or successfully reclaimed. I believe that the Altamont Gas Transmission Company is committed to achieving a high level of reclamation success and that this could be stated more explicitly in the Final EIS.

Sincerely,

Kent Simon

Kent Simon
P.O. Box 805
Lander, WY 82520

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GI18-1 Thank you for your comments. Please see revised Chapter 4B and Appendix B-5.

[Marlys A. Bias]

Docket Nos.
Pacific Gas Transmission Company) CP89-460-001
Altamont Gas Transmission Company) CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to review and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Laurence J. Sauter, Jr., Environmental Compliance Branch, Room 7312, at the same address.

All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Marlys A Bias
1112 E Pershing
Riverton WY 82501

GI19-1 I am in favor of the Altamont Pipeline but prefer they use the Jeffrey City Rt.

GI19-1 Thank you for your comments.

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[Claudia Page]

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
) CP90-1375-000

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All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Claudia Page
505 So. 2nd East
Riverton

GI20-1 I feel the South Pass area should not be disturbed because of the historical value it has.

GI20-1 Thank you for your comment. Cultural and historic resources associated with any route selected would be considered as part of the Section 106 compliance process.

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[Bertha Albright]

Docket Nos.
Pacific Gas Transmission Company) CP89-460-001
Altamont Gas Transmission Company) CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Laurence J. Sauter, Jr., Environmental Compliance Branch, Room 7312, at the same address.

All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Bertha Albright
Rt 1 Box 387E
Riverton, Wy 82501

GI21-1 I am in favor of the Altamont Pipeline but prefer they use the established Jeffry City Route

GI21-1 Thank you for your comment.

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[James G. Gores]

Engineering Offices of

JAMES GORES AND ASSOCIATES
450A SOUTH FEDERAL BOULEVARD
RIVERTON, WYOMING 82501
(307) 956-2442

February 26, 1991

Federal Energy Regulatory Commission
825 N. Capital Street N.E.
Washington, D.C. 20426

Attention: Ms. Lois Cashell

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ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

SUBJECT: Docket No. CP90-1375-000
Altamont Natural Gas Pipeline Project

Gentlemen:

I would like to take this opportunity to voice my support for the Altamont project. I would like to address the project from the standpoint of the following four topics.

GI22-1 NATIONAL ENERGY NEEDS

Our nation needs better distribution of available energy resources. Failing to meet that need leaves us, as a nation, evermore dependant on foreign energy sources. The coastal area proposed to be served by this pipeline has a far greater demand for fuels than the present distribution system can deliver. Those demands can be met in only one of two ways:

1) Piping our inland supplies to the areas, or

2) Importing foreign sources via shipping.

Given the lack of stability in the world's major petroleum producing areas, this pipeline is clearly in our national interest.

GAS SHIPMENT FROM WYOMING

By all professional assessments, the Lost Cabin/Madden Field area contains world class reserves of natural gas. The area, however, has only enough transmission capacity to move a fraction of its potential production. The Altamont Natural Gas Pipeline project is the most feasible way to get this energy to market.

GI22-1 Thank you for your comments.

Federal Energy Regulatory Commission
February 26, 1991
Page 2

GI22-1 (cont.)

EMPLOYMENT AND TAX REVENUES

Wyoming, in general, and Fremont County, in particular, needs the employment that will be generated by both the construction and long term operation of this pipeline. I feel also that once the Altamont line is in place employment in the gas exploration and production industry will increase because of the availability of product shipment.

Likewise, Fremont County as well as the rest of Wyoming needs the tax revenue which this project will generate. The decline suffered in our tax base over the past ten years has left our county with the inability to meet many basic service needs.

ENVIRONMENTAL IMPACT

I feel the project commits few unrecoverable resources in comparison to its benefits. In fact, it will in large measure improve the environment by making low pollution fuel available to a large area of demand. Almost any alternative fuel satisfying that demand will result in greater, not less, environmental impact.

Thank you for the opportunity to comment on this important and needed project.

Sincerely,

Jim Gores

James C. Gores, P.E.

cc: Mr. Laurence J. Sauter, Jr. FERC

MISC8/W

OREGON-CALIFORNIA TRAILS ASSOCIATION
524 South Osage St. / P.O. Box 1019 / Independence, MO 64051-0519
(816) 252-2276

OFFICERS
[illegible]

DIRECTORS
[illegible]

DIRECTOR EMERITUS
[illegible]

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February 26, 1991

TO: Federal Energy Regulatory Commission
attn: Lois Cashell
FROM: Archaeology Committee, Oregon-California Trail Assn.
RE: EIS for Altamont Natural Gas Pipeline Project

The OCTA Archaeology Committee has reviewed the Altamont pipeline proposal with attention to its impact on South Pass. We are 7 professional archaeologists and 5 trained avocational archaeologists charged by OCTA with identification, study and interpretation of the Oregon-California Trail.

Over the last 150 years remnants of the great overland migration route have been plowed and paved, excavated and buried, subdivided, intersected and flooded. Precious little of the Trail has been preserved in its natural state....a few ruts here, a crossing point there, a camping spot, some carvings. In Wyoming for the few miles along the Sweetwater River over South Pass to Hwy 287 the immigration route remains in its elemental state, interrupted by nothing but a few two-tracks, as it achieves the high water mark of each immigrant's passage---South Pass.

It is nearly impossible to find a contemporary diary from 1836 to 1866 that does not mention South Pass. It is nearly impossible to find a similar area so important and still so undisturbed except by what happened there 150 years ago. It is hard to believe that we would let this wide historical vista be marred by the permanent scarring of pipeline construction.

We are not some unreasonable, special interest, splinter group seeking to block progress. We recognize that Altamont is trying to win a bid to furnish natural gas to an area in need of cheap, clean energy. We recognize that their route must

GI23-1 intersect the Trail. We feel that Altamont is obliged to make that intersection as negligible as possible. The only way for them to achieve this end still cross Wyoming is to use the Jeffrey City Alternative Route which intersects the Trail cleanly on a N/S corridor and leaves it. It must not be allowed to run the pipeline across the South Pass viewshed.

Knowing how these things work, we recognize that FERC is under much pressure and influence from Altamont to allow what the company says is the "cheaper" route. Cheaper to whom? A few cents more cost per MCF still allows Altamont the advantage over other bidders. If Altamont as a company will go out of

[Oregon-California Trails Association, Archaeology Committee]

GI23-1 Comment noted. We believe that Altamont's November 1990 realignment, in conjunction with their rehabilitation/revegetation plan (presented in new Appendix B-5) and other proposed or recommended mitigation described in the EIS, would reduce potential impacts associated with the Trail crossing to less-than-significant levels. Please see revised Chapters 4B and 4L, as well as Appendix B-5.

business because they can't use South Pass, this committee feels their business is not soundly based.

GI23-2 In any event, the OCTA Archaeology Committee is not charged with preserving their business and protecting their profits. We are charged with preserving and protecting the essence of history upon the land. We assume PERC has a similar goal. The open, undisturbed vista of South Pass is what the visitor expects to see in this historic portion of our federally managed lands.

OCTA encourages and assists private landowners to protect Trail remnants on their properties. Should we expect less from our government?

We insist that you weigh the true cost of historical significance on the fragile South Pass landscape. Please require Altamont to use the Jeffrey City Alternative Route.

Sincerely,

Sharon R. Manhart

Sharon R. Manhart
ARCOM Chairman
16300 6300 Road
Montrose CO 81401
1-303-249-2017

CC:
Governor Mike Simpson
Sen. Malcolm Wallopp
Sen. Allen Simpson
Rep. Craig Thomas
Laurence Sauter, PERC
Bill LeBaron, GRRA-BLM
Jack Kelly, LRA-BLM

Dean Murtrie, Altamont
Tom Hunt, OCTA
Bill Watson, OCTA
Ross Marshall, OCTA
Ron Lund OCTA
ARCOM-OCTA

GI23-2 Thank you for your comments. As lead Federal agency, we are responsible for compliance with Section 106 of the NRHP and its implementing regulations, and will take the necessary steps to continue to fulfill the requirements of these regulations

[Lorraine Warpness]

RIVERTON, WYOMING
2/26/91

Docket Nos.
CP89-460-001
CP90-1375-000

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SECRETARY
FEDERAL ENERGY REGULATORY COMMISSION
825 NORTH CAPITOL STREET, NE.
WASHINGTON, DC. 20426

Dear Sir:

I am writting in SUPPORT of the ALTAMONT Natural Gas Pipeline Project, SOUTH PASS ROUTE.

GI24-1 I attended the Riverton meeting 2/26/91 and listened to both sides of the issue, before making up my mind. I also studied the EIS statement and I feel you should be complimented on such a detailed report. I also feel comfortable that great care will be taken on the South Pass Historical Sights and as little damage as possible will be inflicted on that area.

We are anxious that the South Pass Route be used, because of our financial interest in the line being constructed close to FARSON, WYO. We are in a Corporation that owns 8 businesses along with 85 acres of property, at the intersection of Highway 28 & 191. This project would mean a great deal to our small community as well to us. We would be more than happy to help in this project any way we can.

The name of our Corporation is:

SANDY CROSSING ENTERPRISES
CURTIS MARTIN---PRESIDENT
Box 193
FARSON, WYOMING 82932
Phone 307-273-9020

Keep up the good work and contin ue to push this project through. If we can be of any help, please call.

Sincerely

Mrs. Lorraine Warpness

Mrs Lorraine Warpness
803 N 1st
Riverton, Wyoming 82501

GI24-1 Thank you for your comments.

National Trust for Historic Preservation

March 4, 1991

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ANALYSIS BRANCH

BY HAND DELIVERY

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol St., N.E.
Washington, D.C. 20426

Re: Altamont Natural Gas Pipeline Project - Draft Environmental Impact Statement (Dkt. No. CP90-1375-000)

Dear Ms. Cashell:

On behalf of the National Trust for Historic Preservation in the United States, thank you for the opportunity to comment on the draft environmental impact statement (DEIS) for the Altamont Natural Gas Pipeline Project. This proposal calls for the construction a 620-mile pipeline from the United States/Canadian border to a point in southwest Wyoming, where it will interconnect with the proposed Kern River pipeline near Opal, Wyoming.

GI25-1 As currently proposed, the pipeline will traverse the South Pass Natural Heritage Area, an area in Wyoming virtually untouched by modern intrusions that contains hundreds of significant cultural and historic sites of great importance to the heritage of this nation. GI25-2 The centerpiece of this area is the South Pass National Historic Landmark, the point where the Oregon Trail crosses the Continental Divide on the historic route to the west -- a site whose importance in the history of the American pioneer movement is unparalleled.

The National Trust was chartered by the U.S. Congress in 1949 to promote the historic preservation policy of the United States, and to further public participation in the preservation of the nation's historic resources. 16 U.S.C. § 468. Today, the National Trust has nearly 235,000 members around the country. The National Trust has previously expressed its concern over the Federal Energy Regulatory Commission's ("the Commission's") procedures for complying with Section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. § 470f, and the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., in comments on the Commission's proposed revisions to its environmental regulations (Docket No. RM90-1-000). See 55 Fed. Reg. 33027 (August 13, 1990).

It is the position of the National Trust that the draft

1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036
(202) 673-4000

GI25-1 We are aware of a Master Plan for a "South Pass Heritage Area," and have used this Plan as a reference during preparation of the EIS. However, this "area" is not a federally-recognized designation (such as the NRHP) and hence is afforded no status under the regulations with which we must comply.

GI25-2 The South Pass NHL would be avoided by the proposed route (as realigned in November 1990).

GI25-3 environmental impact statement (DEIS) for the Altamont Pipeline is flawed, both substantively and procedurally. The procedural flaws stem from the fact that a preliminary determination resolving all non-environmental issues has been issued by the Commission prior to the completion of any environmental reviews, and from the Commission's failure to integrate the Section 106 and NEPA reviews with each other. In addition, the DEIS is grossly inadequate in its evaluation of impacts on cultural and historic resources, the cumulative impact of the project, and the comparison of alternatives. We therefore believe that a supplemental DEIS is necessary.

I. *Environmental Procedures*.

A. *The Issuance of a Preliminary Determination on Non-Environmental Issues is Likely to Prejudice the Consideration of Environmental Impacts.*

GI25-4 We are particularly concerned about the "phasing" of the pipeline certification process in this case, pursuant to which the Commission has already issued a preliminary determination resolving all regulatory issues other than environmental impacts. It is fundamental that "NEPA procedures must insure that environmental information is available to public officials and citizens *before* decisions are made and *before* actions are taken." 40 C.F.R. § 1500.1(b) (emphasis added).

The Commission violates this basic principle when it approves a pipeline prior to completion of the environmental review process. The binding regulations implementing NEPA promulgated by the President's Council on Environmental Quality (CEQ) expressly require agencies to begin the NEPA process "early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5. *See also id.* §§ 1501.2, 1502.1(g). The CEQ regulations specifically state that agencies should "[i]ntegrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice *so that all such procedures run concurrently rather than consecutively*." *Id.* § 1500.2(c) (emphasis added).

The problems inherent in this "phasing" are candidly conceded in the preamble to the Commission's proposed environmental regulations, which expressly states that applicants are authorized to engage in certain actions after the "phase I" determination based on non-environmental factors is issued, such as to "arrange for financing and initiate contract negotiations," which can potentially prejudice the consideration of

GI25-3 We disagree. We are unaware of any regulation implementing either NEPA or NHPA which requires that the NEPA and Section 106 compliance processes to be integrated. See also response to Comment GI7-4.

GI25-4 The Commission's Preliminary Determinations do not "approve" pipelines. It is a mechanism where the non-environmental issues can be "aired" early on and resolved by the time the more lengthy environmental phase of the case is concluded. In this manner, both the environmental and non-environmental phase can be accomplished concurrently rather than sequentially. It does not prejudice the consideration of alternatives.

alternatives, prior to completion of the environmental review process. 55 Fed. Reg. 33027, 33043 Col. 1 (Aug. 13, 1990). These activities would, in fact, be highly prejudicial to the consideration of impacts and alternatives in the NEPA process. In fact, the underlying concern -- that an after-the-fact EIS will be used to justify an agency decision already made -- is confirmed by the DEIS, whose analysis of key environmental impacts is grossly inadequate (see discussion below).

B. The DEIS Fails to Integrate the Section 106 and the NEPA Processes.

GI25-5 We are likewise concerned that the cultural resource surveys and the review procedures mandated by the National Historic Preservation Act (NHPA) are not being conducted concurrently with the NEPA process. The Section 106 process, like NEPA, is designed to be initiated early in the development of a proposed project, in order to allow alternatives and mitigation measures to be fully explored. The process calls for the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) to be consulted on alternatives, and for these agencies to assist in resolving conflicts throughout the planning process. By its terms, Section 106 expressly requires the federal agency whose license or assistance triggers the statute's applicability to undertake the mandated consultation and review process "*prior* to the expenditure of any Federal funds on the undertaking or *prior* to the issuance of any license, as the case may be." 16 U.S.C. § 470f (emphasis added).

Although the DEIS concedes that the pipeline, as proposed, will have a significant impact on sites potentially eligible for listing in the National Register of Historic Places, it fails to include any meaningful assessment of the impact of the pipeline on cultural and historic resources. The EIS must include an assessment of the impact on historic and cultural resources. *See* 40 C.F.R. § 1502.16(g). However, the DEIS candidly states that "[e]ligibility for listing in the [National Register] for most of the resources identified within the project [area of potential effects] by the background search, has not been determined." GI25-6 DEIS, at 4M-8. Without the issuance of a supplemental DEIS for comment, the public will be deprived of any meaningful opportunity to comment on one of the most significant areas of impact of the pipeline project.

We believe that a supplemental DEIS must be issued for public comment *after* all historic resources have been identified and the effects of the project on those resources have been assessed. It is possible that some aspects of the Section 106 review can be conducted at a later stage of the process (such as

GI25-5 See response to Comments GI25-3 above and GI7-4.

GI25-6 We disagree. See response to Comment GI7-4.

designing mitigation measures for archaeological resources that can be avoided by minor route-realignment or mitigated by excavation). However, it is imperative that all historic resources in the area of potential effects be identified, and impacts that can only be avoided or mitigated through substantial route realignments be thoroughly identified and assessed in the supplemental DEIS.

GI25-7 II. The DEIS Does Not Adequately Evaluate Impacts on Cultural and Historic Resources or Alternatives to the Proposed South Pass Route.

A. The DEIS Fails to Identify and Evaluate Previously Unknown Historic Resources, and Its Evaluation of Impacts on Known Cultural and Historic Resources is Grossly Inadequate.

GI25-8 As currently proposed, the pipeline would come within one-third of a mile of the South Pass National Historic Landmark (South Pass NHL), the confluence of historic pioneer trails to the west coast.[1] In addition, the pipeline will bisect the Historic Mining District, which includes hundreds of historic mines and homesteads as well as historic sites that have been previously determined to be eligible for the National Register. The DEIS candidly concedes that the "importance of and controversy surrounding the routing of the pipeline near this area is clear." DEIS, at 4H-5.

GI25-9 While the DEIS states that a preliminary literature search conducted by Altamont has identified 240 previously-recorded cultural resources within 1,000 feet of the proposed route, 193 of which are within 100 feet of the centerline of the pipeline, there is absolutely no evaluation of the project's impact on these resources, nor is there any discussion of potential mitigation measures. Moreover, the DEIS states that "the identification and evaluation of previously unknown resources is not yet underway." DEIS, at 4M-4. Until all cultural resources within the area of effects of the pipeline are identified and evaluated, it is simply not possible for the Commission to make any meaningful evaluation of the impact of the proposed pipeline on cultural resources relative to the impact of other proposed alternative routes, nor is it possible for the public to provide any meaningful comments.

---

[1] Classification as a National Historic Landmark (NHL) is reserved for nationally significant sites of "exceptional value" to the Nation as a whole." 36 C.F.R. § 65.2(a); _see_ 16 U.S.C. § 470a(a). As a result of South Pass's status as a NHL, the Commission is required, under Section 110(f) of the NHPA, to minimize "to the maximum extent possible" the adverse effects of the pipeline on this site. _Id._ § 470h-2(f).

GI25-7 We disagree. See revisions to Chapter 4M

GI25-8 The "historic mining district" _proposed_ by the BLM would not be crossed.

GI25-9 We disagree. See revisions to Chapter 4M.

GI25-10 Even where the DEIS provides some assessment of impacts, the
evaluation is grossly inadequate. For example, the DEIS casually
concludes, without substantiation, that the pipeline will have no
visual impact on Fort Stambaugh, South Pass City, Niner's
Delight, Lewiston, and Atlantic City, approximately located
between MP 510 and MP 515, all of which have been listed in or
determined eligible for listing in the National Register of
Historic Places. In fact, the DEIS itself contradicts its
GI25-11 unsubstantiated conclusion that there will be no visual impact on
these historic sites. Elsewhere, the DEIS clearly concedes that
construction of the pipeline between MP 423 and MP 555 would
create a scar on the landscape. DEIS, at 4L-9.

GI25-12 We question the assumption made by the DEIS that the scar created by a 100-foot pipeline right-of-way in a Class I or Class II visual resource area can be effectively mitigated through reclamation and re-vegetation. Due to the rocky terrain in the area, as well as the dry climate and short growing season, reclamation will be exceedingly difficult, if not impossible. Because of the low vegetation in the area, the pipeline right-of-way will create a scar on the landscape that will be visible for miles. The sensitivity of this site is demonstrated by the fact that the ruts of wagon wheels on the Oregon Trail are still visible after more than 100 years.

GI25-13 Nor does the DEIS contain any adequate assessment of the
visual impact of the construction of two block valve assemblies
and a compressor station, which the DEIS notes will be located in
a Class I and a Class II visual impact area. DEIS, 4L-9. These
above-ground structures will affect the character of the existing
landscape and create significant, permanent visual impacts.
DEIS, at 4L-3. Likewise, a representative of the Bureau of Land
Management has questioned the DEIS' statement that no new service
roads will be required to access the proposed right-of-way (DEIS,
GI25-14 4J-2), stating that experience shows that the opening of a new
corridor in previously undisturbed areas "invariably" results in
the creation of a "network of service roads." Riverton Ranger
(Nov. 6, 1990). The pipeline and related equipment will
GI25-15 substantially impact an area virtually untouched by modern
structures of any kind.

GI25-10 Field inspection and review of USGS topographic maps clearly support our determination of no visual impact on these features.

GI25-11 Construction of an underground pipeline would scar almost every ground cover type. Appropriate rehabilitation and revegetation measures would be implemented in the South Pass Area. Please see Chapters 4B, 4L and Appendix B-5.

GI25-12 Thank you for your comment. Please see revised Chapters 4B, 4L and 4M, as well as new Appendix B-5. Field inspection does not support the generic statement that the pipeline right-of-way would create a scar on the landscape that would be visible for miles.

GI25-13 The visual impact of these facilities can be mitigated using standard techniques and technology. Please see revised Chapter 4L.

GI25-14 Altamont has not proposed designation of a new corridor. See response to Comment GI5-8.

GI25-15 We disagree that the pipeline would "substantially impact" any of the areas proposed to be crossed.

GI25-16 The DEIS states that a proposed route realignment will avoid, by .35 mile, the current boundaries of the South Pass NHL will mitigate some of the impact to the NHL itself. However, the DEIS cryptically notes, without further explanation, that the boundaries of the NHL are, in fact, under study by the National Park Service. If the actual boundaries of the NHL are determined to be much larger, the proposed route realignment will not, as the DEIS promises, avoid the NHL.

GI25-17 Finally, the DEIS fails to evaluate the cumulative, foreseeable future impacts of opening this area to a utility corridor where none previously existed. It is likely that, once a pipeline corridor is established in this area, others will follow. For example, the corridor created by the WyCal Pipeline, from Opal, Wyoming to Southern California was almost immediately followed by the recently-certified Kern River pipeline, which will provide the interconnection for the Altamont pipeline. These cumulative impacts of the pipeline must be evaluated in the DEIS.

B. The DEIS' Evaluation of Alternatives Is Grossly Inadequate.

GI25-18 The DEIS rejects, with almost no discussion or evaluation, each of the four identified alternatives to the South Pass route. It is therefore impossible to determine, on the basis of the DEIS, whether any of these alternatives present a route that would involve less significant impacts on historic or cultural resources. For example, the Jeffrey City alternative would parallel existing roads or pipeline corridors for 98 percent of the route, and would afford greater distances between the pipeline right of way and the Historic Mining District, including the National Register sites of Fort Stambaugh, South Pass City, Miner's Delight, Lewiston, and Atlantic City, as well as the South Pass NHL. A thorough evaluation of the impacts associated with all alternatives must be made if there is to be any meaningful comparison of these alternatives with the proposed route.

III. Conclusion.

GI25-19 In the National Trust's view, the DEIS does not adequately evaluate the historic and cultural resources that will be affected by the proposed pipeline route or the magnitude of the impacts on those resources. In light of the national significance and sensitivity of the resources in the South Pass area, and the failure of the DEIS to evaluate impacts on those resources, a comprehensive supplemental draft environmental

GI25-16 Thank you for your comment. Please see additional information included on this subject in revised Chapter 4M.

GI25-17 Please see response to Comment GI25-14 above. Additional material on this topic has been included in revised Chapter 5. As a point of clarification, the Kern River pipeline route (proposed in 1985) was subsequently adopted by the proposed Wycal pipeline.

GI25-18 We disagree. Substantial discussion of the South Pass Route Variations is contained in the DEIS. Further, the results of an updated SHPO file search of cultural sites along all of the routes reviewed between the Lost Cabin and Opal areas has been included in revised Chapters 3M and 4M.

GI25-19 We disagree that the NEPA process should be held captive until the Section 106 compliance process has been concluded. The NEPA and the Section 106 processes allow for post-certificate analysis, i.e., conditional certificates which allow work to be completed after the issuance of a FERC certificate but prior to construction.

Ms. Lois Cashell
March 4, 1991
Page 7

impact statement is necessary. We strongly recommend that this document be prepared concurrently with, and incorporate the findings and recommendations of, the Section 106 process that is currently underway.

Respectfully submitted,

Jack Walter

J. Jackson Walter
President

cc: The Hon. Alan K. Simpson
The Hon. Malcolm Wallop
The Hon. Craig Thomas
The Hon. Mike Sullivan
Mr. James M. Ridenour, Director, NPS
Mr. Jerry L. Rogers, Associate Director for Cultural Resources, NPS
Mr. Delos Cy Jamison, Director, BLM
Mr. Michael R. Deland, Chairman, CEQ
Robert Bush, Executive Director, ACHP
Dr. David Kathka, Wyoming SHPO
Mr. Laurence J. Sauter, Jr., FERC
Johanna Wald, Natural Resources Defense Counsel
Thomas France, Wilderness Society

[Jay A. McFarland]

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ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

Pacific Gas Transmission Company)
Altamont Gas Transmission Company)

Docket Nos.
CP89-460-000
CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Laurance J. Sauter, Jr., Environmental Compliance Branch, Room 7312, at the same address.

All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address:
Jay A. McFarland
217 Castro Circle
Riverton WY 82501

Altamont Gas Transmission Company CP90-1375-000

Dear Sir

GI26-1 I have worked and lived in this area of Wyoming for 39 years. I was general manager for Morning Star and Cream O' Weber Dairies until I retired, I also had a ranch and raise hereford cattle. I speak as a business man and a farmer

I am very familiar with the area where the Altamont Natural Gas Pipeline project course goes. My experience with other projects such as this have been very good. The work to prepare the land, dig the trench, and lay the pipe do make a difference in the immediate soil terrain but this is only temporary and in just a few years, perhaps two or three, the growth of normal native plants and replanted species make a better and more productive source of feed for deer, antelope, elk, cattle and sheep than we have had before

The fact that prehistoric writings on cliffs or early trails such as

GI26-1 Thank you for your comments.

GI26-1 (cont.) the Oregon trail, The Mormon trail, The Pony Express trail, The Military Forts can exist just as they have before and as I see from your maps the pipeline would be a few miles away from any of these.

Much of the opposition to the Natural Gas Pipe Line comes from a few people who do not understand the value we would receive and stress only a few things that can be used in a worthwhile way if they want to put out the money and work in a cooperative way. They should not impede progress.

Jay A McFarland
217 Custer Circle
Riverton Wyo 82501

[Lennis I. Galliher]

Docket Nos.
Pacific Gas Transmission Company) CP89-460-001
Altamont Gas Transmission Company) CP90-1375-000

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ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

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All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Lennis I Galliher
P.O. Box 306
Riverton, Wyo 82501

GI27-1 After attending the hearing, it is my hope an alternate route is found for the pipe line. It would be a shame to Mess any more with the South Pass area and after listening to the ranchers in the Jeffrey City area who are fighting for survival, they should be left alone!

GI27-1 Thank you for your comments.

[Neil Hauff]

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

		Docket Nos.
Pacific Gas Transmission Company	)	CP89-460-001
Altamont Gas Transmission Company	)	CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Laurence J. Sauter, Jr., Environmental Compliance Branch, Room 7312, at the same address.

All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Billings, MT

Commenter's Name and Address: Neil HAUFF
PO Box 424
Denton MT 59430

GI28-1 I am a citizen & business man in Denton Montana and I support Altomont pipeline project and Environmental impact Statement

Neil E Hauff

GI28-1 Thank you for your comment.

FILED
OFFICE OF THE SECRETARY
91 MAR -5 PM 3:07
REGULATORY
COMMISSION

Wyoming Wilderness Coalition
201 Main Street
Lander, Wyoming 82520
(phone: 307-332-7031)
March 3, 1991

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MAR 0 6 1991
ENVIRONMENTAL COMPLIANCE AN
ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington DC 20426

Dear Ms. Cashell:

Thank you for the opportunity to comment on the Altamont Pipeline Project Draft Environmental Impact Statement [Docket Nos. CP89-460-001 and CP90-1375-000].

The Wyoming Wilderness Coalition, a collection of ten conservation organizations, is currently writing a Conservationists' Wilderness Proposal for Wyoming BLM Lands. We have studied over a million acres of public land in the state, and are now in the final phases of compiling and publishing our proposals for Wilderness designation. Two units--Fuller Peak and Lysite Badlands--will probably be included in the bill we present to Congress, and they lie along the Altamont pipeline routes. Therefore, we are concerned that the wilderness characteristics of these areas not be impacted or destroyed.

GI29-1 Enclosed are maps of both units. As indicated, Altamont's Proposed South Pass Route and the Alkali Butte Variation go through the Fuller Peak unit. Because of this, we request that Altamont use the Jeffrey City Variation, instead. If either the South Pass Route or Alkali Butte Variation is used, we request that the pipeline be rerouted about one-half to three-quarters of a mile east, in the already-established pipeline corridor.

The Jeffrey City Variation lies about one-quarter of a mile east of our Lysite Badlands unit, in an already-established corridor. We want to be sure that Altamont does not drift west and inadvertently damage the wilderness values on this unit, especially during construction.

We request confirmation from the Federal Energy Regulatory Commission that the values of wilderness and naturalness on these two units will be protected, regardless of which route is chosen. Please send us the stipulations or directives for realignment which will be applied to the Altamont Pipeline to protect these units. Thank you very much.

Sincerely,

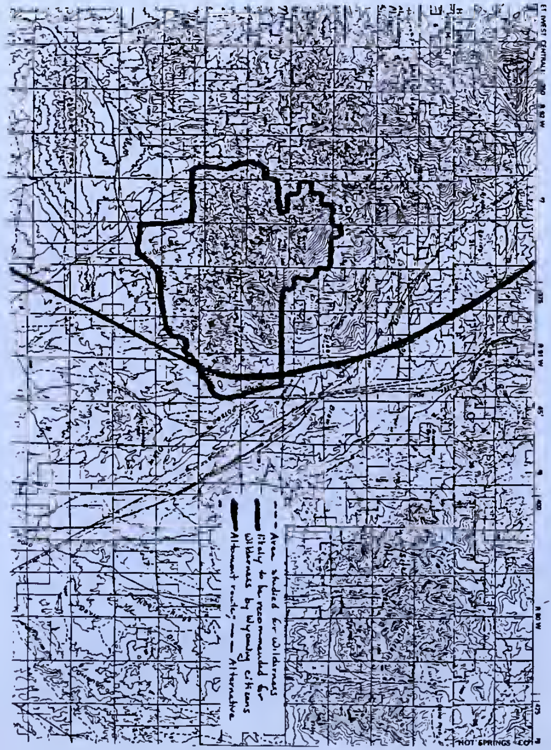
Lynn Kinter

Lynn Kinter
Statewide Coordinator

[Wyoming Wilderness Coalition]

GI29-1 Thank you for your comment, which discusses an area surrounding Fuller Peak as a unit which will "probably be" included in the coalition's proposal for wilderness areas. There is presently no formal mechanism for citizens or citizen groups to propose areas to be designated as wilderness on public lands. Further, if the Fuller Peak unit was eventually proposed for such designation, it is uncertain whether Wilderness status would be granted by Congress. Nevertheless, because Altamont's proposed route is located adjacent to the Point Mountain Road (which forms the eastern border of this proposed "unit"), its presence would not necessarily preclude the unit from being considered for wilderness designation. (We note that the map provided with this comment does not accurately locate the proposed route in this area.)

cc: Laurence J. Sauter, FERC Environmental Project Manager
Jim Roseberry, Worland District Environmental Coordinator
Jack Kelly, Lander Resource Area Manager
Larry Mehlhaff, Northern Great Plains Sierra Club
Marcia Rothwell, Wyoming Wildlife Federation
Tom Dougherty, National Wildlife Federation
Stephanie Kessler, Wyoming Outdoor Council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likely to be recommended for wilderness by Wyoming citizens
Alternate route; — Alternative
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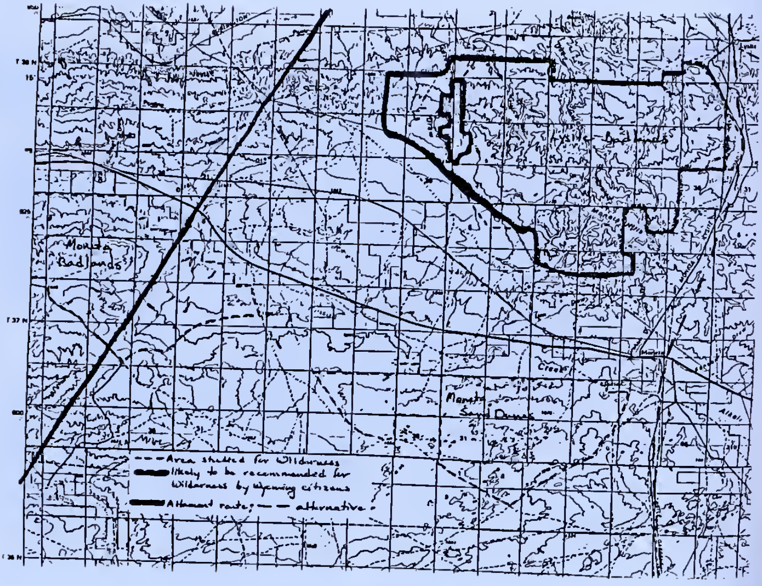
HOT SPRINGS CO


Moneta Badlands
Lysite Badlands
Moneta Sand Dunes
Creek
Moneta
Wire
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T 37 N
T 36 N
- - - Area studied for Wilderness
likely to be recommended for Wilderness by Wyoming citizens
Alternate route; — — alternative.

[Michael Massie]

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ANALYSIS BRANCH

1209 "W" Hill Road
Laramie, WY. 82070
March 1, 1991

Laurence J. Sauter Jr.
Room 7312
Federal Energy Regulatory Commission
825 N. Capitol St. N.E.
Washington D.C. 20426

Dear Mr. Sauter,

I wish to offer a few thoughts concerning Altamont's proposed pipeline route through South Pass. During my seven years of residence in South Pass City (1982-1989), I hiked, fished, hunted, and camped in South Pass during all months of the year.

I also possess a master's degree in history and have worked as a public historian for the past 12 years. During most of this time, I have researched the history of Wyoming, particularly the South Pass area. In addition to teaching university-level courses in Wyoming history, I was one of the team members in the 1990 state-financed planning and marketing study of the South Pass region. As a result of this experience, I understand the ecology and historical significance of South Pass as well as anyone.

GI30-1 I oppose Altamont's proposed South Pass route for several reasons. A plethora of books and articles describe the historical significance of this important pass. However, only a few studies examine the nearly pristine integrity of setting that makes South Pass a unique and very valuable cultural resource. The BLM-NPS study of the Oregon Trail notes that the trail's segment from Split Rock to Farson, with South Pass in the center, constitutes the best remnants of this trail in the country. The NPS has designated a small segment, where the trail crosses the Continental Divide in South Pass, as a national landmark.

GI30-2 Nevertheless, the state-financed study, "The South Pass Heritage Master Plan," is the first investigation to adequately list the myriad of high-quality cultural resources in and adjacent to the pass and to examine their potential for the development of tourism. I am confident that you have read this document, so repetition here is unnecessary. Noting South Pass' abundant historical resources and its potential for increased tourism, the study emphasizes that Altamont's pipeline clearly poses the most serious threat to both of these desirable characteristics.

GI30-1 Thank you for your comments.

GI30-2 The study's comments regarding the proposed Altamont project are based on the premise that the project would "potentially impact sites such as Fort Stambaugh, the Miners Delight-Atlantic City-South Pass City mining area, and the Emigrant Trails" (Page 125). We feel that the FEIS clearly demonstrates that the potential impacts would be avoided (Fort Stambaugh and the referenced mining area) or mitigated to less-than-significant levels.

GI30-3 I stated previously in this letter that South Pass is "nearly pristine." After journeying only a few hundreds yards away from Highway 28, the single paved road in the greater South Pass area, a person immediately experiences the immensity of the land as it appeared to the Oregon Trail emigrants and gold miners of the 1860's, with the only visible "modern" blemishes being scars from previous seismic lines and the former railroad right-of-way. Even though the seismic activities occurred decades ago, their remains are still somewhat visible, especially just to the north of Oregon Buttes, which forms the southern boundary of the pass. South Pass is a high (8,000 ft.), dry, cold, and unforgiving section of the West. The fact that the remains of previous activities linger much longer here than elsewhere should not be surprising, for these very factors account for the fine preservation of the Oregon Trail ruts, stage station remains, old ranches, and nearby historic gold mines. GI30-4 Thus, the pipeline's right-of-way and the associated roads will be clearly visible for the next few decades, at least.

While I am aware that reclamation technology has advanced since the seismic lines were imposed on the land thirty years ago, no studies exist that conclusively demonstrate that the trench which would hold Altamont's line can be successfully reseeded promptly, or even in the long term. During the recent public hearing in Riverton, contractors for Altamont admitted that reclaiming this line would GI30-5 be a challenge, and they offered no promises of success. This physical intrusion, upgraded existing roads, any new roads that may be built, and the obvious inducement for more pipelines and other linear developments to use South Pass will definitely and adversely affect one of the nation's most remarkable resources.

GI30-6 But, even if the rest of the country failed to recognize South Pass' significance and a tourist never again sets foot on this valued ground, this pass remains worthy of preservation, for it is a physical and psychological connection for the people of Wyoming to its past. This is how "we" got here. To compromise the integrity of this isolated site, which presently allows visitors to smell and feel the land and the wind as their ancestors did, is to sever an important connection with the past.

GI30-7 Altamont's proposed route over South Pass will significantly impact this historic area and will set the stage for more physical intrusions that will destroy the very characteristics which make this place important. GI30-8 On the other hand, the proposed "Jeffrey City" route will not produce these impacts and will still allow the pipeline to be built. Altamont complains that this latter route will cost more money, but the additional cash will create more jobs. Right? Besides, this is just the cost of doing business on our public lands. Clearly, the "Jeffrey City" option will permit the construction of the line without sacrificing other resources, especially such a jewel as South Pass.

GI30-3 This comment overlooks the fact that neither rehabilitation/revegetation measures nor visual impact mitigation has been applied to the referenced "blemishes."

GI30-4 We disagree that the pipeline right-of-way, properly mitigated, would be "clearly visible for the next few decades." Further, no new roads would be required in the South Pass area.

GI30-5 We disagree. See previous two responses, as well as revised Chapters 4B, 5 and Appendix B-5.

GI30-6 We agree that the "pass remains worthy of preservation." We believe that adequate mitigation is in place to assure this objective.

GI30-7 We disagree that this outcome is inevitable. Please see additional material on this topic included in revised Chapter 5.

GI30-8 As documented in the EIS, adoption of the Jeffrey City Variation would result in substantially more disturbance due to increased length and significantly greater impacts on several resource areas (see Table 6-3). Further, the BLM has identified the proposed route through the South Pass area as its preferred alternative. (See BLM comments on the DEIS, Page 2.)

GI30-9 I urge FERC to permit the construction of the Altamont Pipeline that utilizes the "Jeffrey City" route. Thanks for your time and consideration.

Sincerely,

Michael Massie

Michael Massie

cc: Governor Sullivan

GI30-9 Thank you for your comments

GI31-1

2-17-91

Dear Sir,
I couldn't find the
depth of the line in your
the entire summary book, but
have heard its 30 in deep.
Is that is right? I don't
feel it is deep enough.
I would like to
receive a copy of your minutes
of your meetings!!

Thank you,
Eva McIntosh
Box 43 E [illegible]
Havre, Mont 59501

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

[Eva McIntash]

GI31-1 Thank you for your comment. U.S. Department of Transportation (DOT) Regulations (49 CFR Parts 190, 191 and 192) would require the buried pipeline to be installed with between 18 and 30 inches of cover, depending on the material. In normal soils, at least 30 inches of cover are required on buried pipelines. In consolidated rock, a minimum of 18 inches of cover are required. These requirements are for DOT's "Class 1 Locations." The entire Altamont Route is designated as a Class 1 Location.

The transcript of the meeting held on February 27, 1991, to receive comments on the DEIS is available from Richard L. Mattson, Registered Professional Reporter, 316 N. 26th Street, Room 5405, Billings, Montana 59101, at a cost.

WILLIAM C. SNIFFIN

Box J, Lander, Wyoming 82520 307-332-2323 Fax: 332-9332

The Federal Energy Regulatory Commission
at hearing in Riverton, Wyoming Feb. 25, 1991

DOCKET NOS
CP89-460-001
CP91-1375-000

Dear members of the committee:

Re: The Altamont Pipeline project over South Pass

I am speaking as a resident of Fremont County, Wyoming, who has a strong interest in tourism.

In that capacity, I presently serve as vice-chairman of the Wyoming Travel Commission and I serve on the county tourism boards in Fremont, Teton and Sublette Counties

G132-1 My concern is that the construction of the pipeline over South Pass will have a severe negative impact on tourism development of that area during the time period planned for its construction.

The 150th anniversary of the Oregon Trail will be celebrated in five western states in the next two years. States like Wyoming are planning to spend hundreds of thousands of dollars to attract tourists to the area. South Pass becomes the focal point for this tourism effort for many reasons:

1) That is where all the different trails came together. Gov. Mike Sullivan points out that people have used the pass as their main route through the mountains for 110,000 years.

2) For people in California and Oregon, they can experience South Pass and then swing north to Yellowstone for their family vacations.

3) South Pass contains some of the most scenic areas on the trail.

4) South Pass contains many of the most historical areas on the trail, including its proximity to ghost towns and gold mining areas.

It seems appropriate the your Commission should give a high consideration to these tourism facts when making your decision concerning the Altamont pipeline route.

Thank you for your consideration.

Sincerely,

William C. Sniffin

[William C. Sniffin]

G132-1 Comment noted. We believe that construction of the proposed project would have a short-term impact on recreation/tourism, limited primarily to the season of construction. In the long-term, no impact to tourism development would be expected.

[Fred Biserman]

Docket Nos.
Pacific Gas Transmission Company) CP89-460-001
Altamont Gas Transmission Company) CP90-1375-000

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All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Fred Biserman
6414 West Riverside Trl
Casper WY 82604

Dear Sirs:

GI33-1 I am very much concerned with the proposed Altamont Pipeline route across So Pass. My concern is focused on the fragil environment (thin to non-existant soils) associated with this area and the almost impossible rehabilitation of a pipeline corridor, a fact admitted to in the EIS.

I strongly recommend the Jeffrey City alternative, a route with proven pipeline rehabilitation success.

Fred Biserman

GI33-1 Thank you for your comments. Because we share your concerns, DEIS Recommendation 66 requested that Altamont identify specific measures which it would implement to mitigate soils, vegetation and visual impacts in the South Pass area. Based on a re-analysis of the available soils information, further visual impact analysis, and Altamont's response to DEIS Recommendation 66, we feel that significant impact would be avoided or substantially reduced. Please see revised Chapters 4B, 4L and Appendix B-5.

[Lewis B. Diehl]

Docket Nos.
Pacific Gas Transmission Company) CP89-460-001
Altamont Gas Transmission Company) CP90-1375-000

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Meeting Location: Riverton, WY

Commenter's Name and Address: LEWIS B. DIEHL
101 W. MAIN
RIVERTON WYO 82501

GI34-1
1. I FULLY SUPPORT THE PROPOSED ROUTE
2. THERE WILL BE NO NEGATIVE TOURISM EFFECT
3. THE JOBS & TAXES WILL HELP FREMONT COUNTY
4. THERE ARE ROADS & TRAILS ALL OVER THE SOUTH PASS COUNTRY — A FEW MORE WON'T BE NOTICED.

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GI34-1 Thank you for your comments. We generally agree with your prediction regarding tourism. However, we note that the proposed project would require no new roads in the South Pass area.

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ANALYSIS BRANCH

Thomas Peters
Box 1250
Lander WY 82520
3/14/91

Mr Laurence J Sauter Jr
Federal Energy Regulatory Commission
825 North Capitol St NE, Room 7312
Washington DC 20426

Dear Mr Sauter,

GI35-1 Please explain the "Public Convience and Necessity" of the Altamont natural gas pipeline considering the following: CPUC projected need of natural gas by year 2005 ; 1,600 – 2,100 MM cf/d Natural gas headed to California:

proposed PGT/PG&E pipeline	755 MM cf/d
being constructed Kern River → Mojave	700 MM cf/d
proposed El Passo → Mojave	400 MM cf/d
proposed Northwestern Expansion	534 MM cf/d
proposed TransWestern	200 MM cf/d
Total	2,589 MM cf/d
Projected Need	1,600 - 2,100 MM cf/d

I request a quick reply as to why Altamonts 700 MM cf/d is in the public interest.

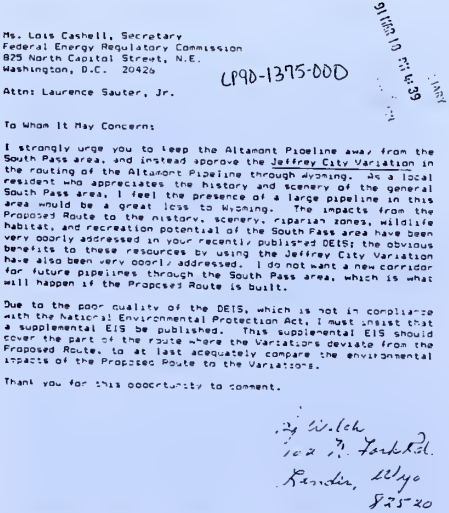
Thank You
Thomas Peters

[Thomas Peters]

GI35-1 Thank you for your comments. Public Convenience and Necessity (PCN) is an issue that is determined by the Commission on the basis of all relevant factors, including potential environmental impact associated with a proposal. As such, PCN is well beyond the scope of this or any other EIS, as are any determinations regarding the "public interest."

As a point of clarification, please note that (a) approximately 51 percent of the volume Northwest Pipeline Corp. proposes to transport would be delivered to customers in the Pacific Northwest and Las Vegas areas, and that the remainder of the markets proposed to be served by the Northwest Expansion Project are uncertain at this time, and (b) the Mojave Pipeline's capacity at the Mojave-El Paso-Transwestern interconnection is limited to 400 MMcf/d. These factors would reduce the 2,589 MMcf/d "total" well below the 2,100 MMcf/d "projected need" referenced in this comment.

[B. Welch]



Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

CP90-1375-000

91 MAR 10 PM 4:39

Attn: Laurence Sauter, Jr.

To Whom It May Concern:

GI36-1 I strongly urge you to keep the Altamont Pipeline away from the South Pass area, and instead approve the Jeffrey City Variation in the routing of the Altamont Pipeline through Wyoming. As a local resident who appreciates the history and scenery of the general South Pass area, I feel the presence of a large pipeline in this area would be a great loss to Wyoming. GI36-2 The impacts from the Proposed Route to the history, scenery, riparian zones, wildlife habitat, and recreation potential of the South Pass area have been very poorly addressed in your recently published DEIS; the obvious benefits to these resources by using the Jeffrey City Variation have also been very poorly addressed. GI36-3 I do not want a new corridor for future pipelines through the South Pass area, which is what will happen if the Proposed Route is built.

GI36-4 Due to the poor quality of the DEIS, which is not in compliance with the National Environmental Protection Act, I must insist that a supplemental EIS be published. This supplemental EIS should cover the part of the route where the Variations deviate from the Proposed Route, to at last adequately compare the environmental impacts of the Proposed Route to the Variations.

Thank you for this opportunity to comment.

B. Welch
102 N. Fork Rd.
Lander, Wyo
82520

GI36-1 All of the resource concerns referenced in this comment are adequately addressed in the EIS. In particular, see revised Chapters 4D (recreation), 4E (riparian, wildlife), 4L (visual or "scenery") and 4M (cultural resources and history), as well as Appendix B-5.

GI36-2 As documented in the EIS, adoption of the Jeffrey City Variation would result in substantially more disturbance due to increased length and significantly greater impacts on several resource areas (see Table 6-3).

GI36-3 Altamont has not proposed designation of a new corridor. See response to Comment GI5-8.

GI36-4 We disagree that the EIS is inadequate, or that it fails to comply with NEPA. See response to Comment SA16-8.

[Evelyn Lowell]

91 MAR -6 PM 4:21

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-160-001
CP90-1175-000

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All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Mrs Evelyn Lovell
905 Antelope Drive
Riverton, WY - 82501

GI37-1 Please do not run the altamont Pipeline thru the artifact area of South Pass

GI37-1 Thank you for your comment. We are uncertain of the precise location of the referenced "artifact area." However, our compliance with the Section 106 process would mitigate any potential impact on this area such that the impact would be "non-adverse."

[Robert K. Knox]

Pacific Gas Transmission Company	)	Docket Nos. CP89-460-001
Altamont Gas Transmission Company	)	CP90-1375-000

91 MAR -6 PM 4:08

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All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Billings, MT

Commentar's Name and Address: Denton Cafe "Robert K. Knox"
Box 874
Denton, Mont. 59430

GI38-1 The Denton Cafe and staff support the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement. I feel the community of Denton can accomodate to such a project. It would be good for the community. My restaurant is willing to accomodate to whatever meals or needs the construction crew will need. If around the clock operation is necessary, we are willing to do whatever is needed. I feel the whole community supports such a project and feels it will be good for the community.

GI38-1 Thank you for your comments.

[Steve Kueger]

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
) (CP90-1375-000)

91 MAR -6 PM 4:02

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Laurence J. Sauter, Jr., Environmental Compliance Branch, Room 7312, at the same address.

All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Billings, MT

Commenter's Name and Address: Steve Kueger
P.O Box 397
Denton, MT. 59430

GI39-1 Being a Business Man of Denton MT. I am in favor of the Altamont Gas pipeline and the environmental impact statement.

GI39-1 Thank you for your comment.

[Albert T. Brown]

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
) CP90-1375-000

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All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Riverton, WY

Commenter's Name and Address: Mayor Albert T. Brown
Box 1700
Riverton Wyo 82501

Dear Sirs:

GI40-1 I would like you to consider a few comments concerning the proposed natural gas pipeline project.

Having owned property at Atlantic City and lived in this area for many years, I feel the impact of the line would be minimal. Most of the protests are from the Lander area. When the steel mill and railroad were built, there were hardly any protests because it was a benefit to Lander. As this project would benefit all of Fremont County, I am definitely in favor.

GI40-1 We agree that with the mitigation proposed by Altamont and recommended in the EIS, the impact of the proposed pipeline would be minimal. Thank you for your comments.

OREGON-CALIFORNIA TRAILS ASSOCIATION
OFFICE OF NATIONAL HISTORIC TRAILS PRESERVATION
650 OLD TRACE ROAD • PALO ALTO, CALIFORNIA 94306 • (415) 941-0615

[Thomas H. Hunt]

91 MAR -8 PM 3:22
FILED
SECRETARY

March 1, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: Docket Nos. CP89-460-001, CP90-1375-000

Dear Ms. Cashell:

GI41-1 As National Trails Preservation Officer for the Oregon-California Trails Association, this nation's only organization dedicated to the preservation, appreciation, and enjoyment of the overland emigrant trails experience, I want to go on record as very strongly opposing the South Pass routing of the proposed Altamont Pipeline project. From a historic preservation point of view, this routing is entirely unacceptable and will cause irreparable damage to a cultural resource which is an outstanding part of our nation's westering heritage.

GI41-2 As the person within our organization who has to deal with the day-to-day problems of trails preservation, I can say that there is no more important site along any of the overland trails than South Pass. Its preservation and protection is of the highest priority.

GI41-3 We urgently request that the FERC deny the proposed routing through historic South Pass. We support the Jeffrey City alternative as being much less destructive to this nation's national heritage.

Sincerely,

Thomas H. Hunt

Thomas H. Hunt
National Trails Preservation
Officer

GI41-1	Thank you for your comment. However, we disagree with your conclusions.
GI41-2	We feel that the EIS recognizes the sensitivity of the South Pass area, and that appropriate mitigation has either been proposed by Altamont or recommended in the FEIS.
GI41.3	Thank you for your comments.

[The Nature Conservancy, Oregon]

The Nature Conservancy

Oregon Field Office
1205 N.W. 25th Avenue
Portland, Oregon 97210
503 228-9561

RECEIVED BY
JAN 29 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

January 22, 1991

Dear Ms Lois Cashell;

I am representing The Oregon Chapter of The Nature Conservancy and commenting on Docket Nos. CP89-460-001 and CP90-1375-000 entitled PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft EIS.

The proposed pipeline crosses Nature Conservancy property between MP 307.1 and MP 307.6. There are 4 references in the document EIS that mention our preserve: 3E-21, 4D-7, 4E-33 and 6-32.

GI42-1 The document mentions on page 4D-7 that our land is preserved for education and recreation. This is not quite accurate. Our lands are preserved for scientific and educational uses. Passive recreation for natural history education is encouraged. The preserve is in a non-use land status.

GI42-2 On pages 3E-21 and 4E-33 the document discusses the Special Native Plant Communities on the Lindsay "Grassland" Preserve. The name of this site is the Lindsay Prairie Preserve. The document does not mention that two of the Special-Status Wildlife Species mentioned in table 4E-7 are located on the preserve and need to be addressed before construction; Washington ground squirrels and long-billed curlews.

GI42-3 On pages 4E-33 and 6-32 the document refers to PGT developing a site-specific construction and restoration plan to reestablish the native vegetation. We were glad to see this included in the EIS and will be cooperating with you on this plan and implementation.

Sincerely,

Berta A. Youtie

Berta A. Youtie
NE OR Stewardship Ecologist
P. O. Box 1188
La Grande, OR 97850
(503) 962-3903

National Office 1800 North Kent Street Arlington, Virginia 22209 703 841-5300

GI42-1 Please see revisions in Chapter 4D.

GI42-2 Please see appropriate revisions in Chapters 3E and 4E. In order to protect Special-Status Species from increased disturbance by humans, Table 4E-7 does not identify site-specific locations of occurrence for any Special-Status Species.

GI42-3 Thank you for your comment and input.

[Mr. & Mrs. Noris Stevens]

January 17, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RECEIVED BY
JAN 29 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Dear Ms. Cashell:

Re: Docket No. CP89-460-001

This letter is regarding the proposed expansion plans of Pacific Gas and Transmission in northern Idaho at their Compression Station No. 3.

The location of this compressor station is 2 1/2 miles south of the Canadian border and directly across Highway # 95, from our home.

We have correspondence dated from 1969- thru - 1990 from PGT, with promises to correct the noise problem at station #3. The noise controll seems to be a problem that they are unable or unwilling to correct.

We live with this noise 24 hours a day, and it spoils our enjoyment of life.

Because PGT equipment does not cross our property, they assume that we should not have any interest in what they do or do not do, or their plans . We have been ignored since they began construction of this unit in 1969. We were never advised of meetings that were held, where we could have discussed our side of the noise issue. In fact we never received anything but noise from PGT.

We were not aware of PGT plans to add another compressor to station #3, until PGT Employee's were in our front yard, measuring the distance from our front door to compressor building , for ambient noise readings for planned project.

When we asked them what they were doing, they explained and told us the engineer needed to know how far we were from the station so that he could prepare for installation of the new additional compressor. Needless to say we were very surprised and angry. Having attended a Planning and Zoning meeting in Bonners Ferry in the fall of 1989 and being assured by a Mr. Woodward of PGT that there would not be any increase in noise or equipment, when the new pipe line went thru.

GI43-1 That is when I called FERC and spoke to Mr. Robert Arvelund, who renewed my faith in a Government Employee. He went out of his way to be both helpful and kind, and followed thru with his promise to mail me a copy of the PGT proposal and to be sure I was on the mailing list for any future information. I sure wish we had more people like him in government offices.

PGT has made several promises of improvements to try and correct some of the problems, (#1 is the constant noise), but we have had promises before and somehow nothing seems to get any better.

I would be willing to appear at a meeting in Washington, if it will help in making our life better. If you think it will help to be there to present my side of the problem, then please advise me as to place and time. We have lived with this noise long enough.

Enclosed is a short story of what has happened to us, and what we think of the PGT proposal.

Thank You,
Mrs Don Stevens

Mr. & Mrs. Norris Stevens
HCR # 61, Box 176
Bonners Ferry, Idaho 83805

AS
c/c:

Mr. Mark C. Kalpin
Mr. Robert Arvedlund

(page 2)

GI43-1 Mr. Arvedlund thanks you for your comment.

Background of our problem:

In 1968, my husband built our home in the center of 22 acre's of forest. We are located in north Idaho, 2 1/2 miles south of the Canadian border. Our view to the North is tall trees and mountains in Canada. Our view East is of the river below the back deck, across the river is forest and mountains. Our view South is forest. Our view West is 650' front yard and garden area, Highway # 95, and at that time, forest covered hills. We have abundant wildlife, Elk, Dear, Bear, Moose, Coyote, along with a verity of our feathered friends. It is so quiet you can hear the river rushing by, over 400 feet away. You can hear the breeze blowing thru the trees and the chatter of our feathered friends. We felt we lived in the most beautiful place on earth.

In 1969, PGT arrived, and our world changed forever.. Although they had a large section of property, they chose to build directly across the highway from us, and began tearing the hill apart and not stopping until they had removed every tree and all soil and rock, until they had a barren flat spot on the same level as our home. Then they proceeded to build the building to house the compressor unit, and install pipes. Not only did the noise make us unhappy, the view to the west from our front yard and windows, made us sick. Our peaceful life was destroyed by PGT. We have letters of promise that they were going to correct the problem, after many complaints from us, but it has been a bandaid fixit job and never solved. And until now,(PGT wants this new proposal to go ahead at full steam,) we are acknowledged by PGT as being their close neighbor, and they have made many promises again, but once bitten, twice shy, of their promises.

The following is our proposal to FERC.

GI43-2 Either deny or delay the PGT proposal for their expansion, until all problems are corrected with us and Station # 3. The major problems are, noise from intake area's, and the scrubbers that they installed as close as possible to the front of their propert line, directly across the highway from us. This noise we live with every day and the visual sight is very ugly also. All we are asking for is peace and quiet. If and when these problems are solved and you choose to allow PGT to proceed with their proposed expansion, then we would ask the following be mandatory in the permit.

GI43-3 # 1. Any new building or equipment installed or built, would be built , South and West of the present location, keeping a standing forest breaker between Highway #95 and any new construction to the West of their property line.

GI43-4 # 2. Our water well is located about 200 feet East of the Scrubbers. We had this well drilled to 150 feet, striking water at the 28 foot level, and not again thru rock for the remaining 122 feet. We do have good clear water, not full of iron like so many wells around us including PGT. But it is classified as surface water, and we are very concerned

(page 2)

GI43-2 The FERC staff is aware of the noise problem associated with the air intake of Compressor Station No. 3, and has recommended a mitigation measure to minimize the noise emanating from this area. Please see Chapter 6.

GI43-3 PGT's proposal to locate its proposed facilities within the boundaries of its existing, previously disturbed station site, which would result in less impact to the environment than would commentor's suggestion to clear a new station site that is adjacent to PGT's existing station.

GI43-4 The FERC staff has recommended that PGT develop a project specific Spill Prevention, Containment, and Control Plan to minimize both the potential for fuel spills to occur, as well as ensure that any impact is minimized. (See Chapter 4C). In addition, we have also recommended that PGT develop a Groundwater Monitoring Plan which will ensure that any project-related impacts on public or private wells are identified and repaired. (See Chapter 4C).

GI43-4 (cont.) that during any new digging and construction by PGT, that A. Either we will lose our water supply by changes in the soil and rock being moved, or B., the water may become contaminated by fuel or sewage. We want our water supply protected.

GI43-5 # 3. We ask that the proposed new Compressor Unit , be in use and tested at another location, with proof that with noise level so low that we will not be forced to endure more noise if and when it is added to the PGT # 3 station. We have had about we can stand of PGT noise.

4. We ask that this permit for any new construction be denied to PGT, until all problems are resolved with the noise problem they have now, and they can prove a remarkable decrease in noise levels.

Thank You,
Mr. & Mrs. Norris Stevens
HCR # 61, Box 176
Bonners Ferry, Idaho
83805

as/ cc

Ms. Lois Cashell
Mr. Robert Arvedlund
Mr. Mark Kepin

GI43-5 The staff has recommended that PGT file noise analyses with the Commission in order that the staff can verify that PGT's noise design criteria would be achieved, and that operation of the existing and proposed units at Compressor Station No. 3 would not exceed an Ldn of 55 dBA at the commentor's residence (See Chapters 4I and 6).

[Gerald E. Moore]

February 19, 1991

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MAR 0 1 1991

ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Re: Docket Nos. CP89-460-001 and CP90-1375-000

Dear Ms. Cashell:

I am writing mainly in regards to the PGT/PG&E Expansion Project proposal, however my comments may also have some impact for the Altamont Project. I am a owner/salesman of Basin Fertilizer and Chemical Co. in Merrill, OR. We presently do business in Klamath and Lake Counties of Oregon; Modoc, Siskiyou, Lassen and Shasta Counties of California. Our business is to sell fertilizers and agricultural chemicals to farmers in these areas. I am a licensed pest control adviser and commercial applicator in both states, with 15 years of experience. I also farm some acreage in Klamath County, OR.

With this past years removal of Telone II nematicide from the California farmers arsenal of pesticides for use in crop production, they have lost a valuable tool in controlling nematodes and diseases which devastate potatoes grown here in the various California counties we service. These nematodes can cause early dying of the plants, transmission of various viruses and diseases, loss in yield, and most importantly total loss of a marketable crop due to blemishes on the tuber which the United States Department of Agriculture (USDA) marketing inspectors are not allowed to approve for fresh market. Telone II can only be used when injected directly into the ground, not for any above ground uses. There are other products used to replace Telone for the time being, but none are as effective as Telone.

The reason I go into such depth on the nematode problem in this area is that these nematodes can be carried quite easily in soil that is on machinery, which when moved from field to field, can infest locations not already having a problem. Many of our growers where this pipeline is being proposed are seed growers, in which their standards of cleanliness, sanitation and growing abilities are very much affected by the fact that their ground is nematode-free. These growers take the utmost care in making sure their own equipment as well as that of custom applicators are sanitized prior to doing any work in nematode-free fields. The biggest concern of these growers is that all equipment must be pressure-washed with hot water and than sprayed with an Antimicrobial and Bacterial disinfectant, common chemical name of Mitrol PQ-57, when moving from field to field, even if it is on the same ranch. The disinfectant helps to rid the equipment of a particular rot organism, Corynebacterium sepedonicium, common name Ring Rot, which the pressure-washing does not always eliminate. It is very important to note these two problems associated with potato production, as their introduction to a seed growers operation can totally wipe them out of business. It should also be noted that there are no other means of reducing these problems on equipment due to the lack of pesticides being registered for use in these open-air type of situations.

GI44-1 The utmost in care must be taken by the contracting agents doing the work not to spread diseases and nematodes from one area to another, which in later years may totally eliminate a man's livelihood. I am sure that this is not the only isolated area that this type of situation will be a problem. I feel it is a problem that can be dealt with, and handled to the satisfaction of growers involved, without too much inconvenience to the time schedules of the contracting agents.

Sincerely,

Gerald E. Moore
Basin Fertilizer
P.O. Box X
Merrill, OR. 97632
PH. 503-798-5655

cc: Mr. Mark C. Kalpin, Environ. Project Mgr.
PGT/PG&E Expansion Project
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Mr. Laurence J. Sauter, Jr., Environ. Project Mgr.
Altamont Project
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

GI44-1 Thank you for this information. Please see revised Chapter 4B for a discussion of this concern

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
) CP90-1375-000

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MAR 0 6 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

Meeting Location: Bonners Ferry, ID

Commenter's Name and Address: Paul Wheeler
HCR 61 [illegible]
Bonners Ferry, ID [illegible]

Comments on reverse

GI45-1 It would appear that even though FERC went to the trouble [illegible] recommending and locating alternate route (Camp Nine) that absolutely no consideration has been given to using this Track

My questions with the Moyie Valley Rd. are

GI45-2 ① Did PGT original eight crossings [illegible] of the Moyie R. have anything to do with the destruction of a formerly "Blue ribbon trout stream"?

GI45-3 ② What is the composition of the substructure i.e. below rubble on each of the crossings & to what depth will these be disturbed? What material will be used as backfill?

GI45-4 ③ What effect will the supposed mitigation measures have on fisheries [illegible] of the Moyie River. Will the "weirs" create more sedimentation by [illegible] & deepening the river by washing out the rubble bottom and exposing erodible soils.

GI45-1 The DEIS did not recommend the use of the Camp Nine Alternative. In response to the FERC staff's concerns regarding construction-related impact on the Moyie River, the DEIS recommended that PGT: (a) provide a detailed environmental, engineering, and economic analysis of the Camp Nine Alternative to the staff for analysis in the FEIS (DEIS Recommendation No. 43) and (b) provide a site-specific construction, restoration, mitigation, and monitoring plan for its proposed crossings of the Moyie River (DEIS Recommendation No. 25). In addition, the staff specifically requested comments from federal and state agencies, as well as interested members of the public, concerning the feasibility and environmental impacts associated with the use of both the Camp Nine Alternative and the Hannafin Canyon Alternative (DEIS, Page 6-12).

GI45-2 Although specific information on this subject is lacking, historical data indicates that repeated log drives which occurred in the late 1800s and early 1900s may be responsible for the Moyie River's current condition. In addition, the Forest Service has informed the staff that its review of aerial photographs that are approximately 35 years old indicate that the Moyie River is fairly stable.

GI45-3 Site-Specific subsurface geological information for each crossing is not available. PGT would use trench spoil for backfill material.

GI45-4 These issues are currently being esamined by the Forest Service, Idaho Department of Fish and Game, and the FERC staff in our review of PGT's proposed Moyie River Fishery Enhancement Plan. Please see revised Chapters 4C, 4F, and 6.

GI45-5	④ What affect will 8 crossings as well as heavy equipment placement of these 26 weirs have on the existing native population of fish and fresh water biota?	GI45-5	Please see revised Chapters 4F and 6
GI45-6	⑤ What is any precautions will be taken to prevent the spread of noxious weeds throughout the pipeline corridor?	GI45 6	This issue is adequately addressed in Chapters 4B and 6, which discuss the problem of noxio weed control and recommend the development and implementation of a noxious weed cont plan in consultation with the appropriate federal, state and local agencies.

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MAR 0 6 1991

ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

[Raymond J. Delay]

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
CP90-1375-000

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All comments **must be received** no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Bonners Ferry, ID

Commenter's Name and Address: Delay Farms, Inc. c/o Raymond J. Delay
Rt. 1 Box 37
Athol, Idaho 83801 phone 208/683-2384

GI46-1 In my conversation with you at the Bonners Ferry meeting, you also suggested I also submit my comments in writing.

PGT/PGE crosses my property in two different locations. The fields the pipeline crosses are both in CRP and must be in the same condition after the pipeline has been installed. The pipeline also goes through a section of timber which might have to be removed. I expect to be compensated for all trees removed or damaged and the soils be treated the same as the CRP ground.

On the C.R.P ground all the top soil must be separated from subsoil and to be placed the same as before excavation. all rocks must be removed at a depth of 10" below the top of the soil. The rightaway must be seeded and fertilized to make sure the grass and legumes seeding will meet or exceed the CRP contract requirements.

The Company must also control all weeds on the entire length of the easement.

GI46-1 Thank you for your comment. Please see revised Chapters 4B and 6.

RECEIVED BY
MAR 0 6 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
) CP90-1375-000

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All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Bonners Ferry, ID

Commenter's Name and Address: Paul Rawlings
Rt. 1 Box 572
Bonners Ferry, Idaho 83805

GI47-1 The permit granted to Pacific and Altamont Gas Transmission Companies should include and make mandatory the plans those companies have proposed for mitigating the impact of construction on the river system and rehabilitating the construction site.

GI47-2 Restoration plans should be required on private as well as public lands. Should that become impossible because agreements with private land owners cannot be made, an alternative route should be chosen rather than compromising the plan as it is proposed in the DEIS.

GI47-3 Access across private land for fisheries improvement and to construct silt traps, when that is necessary, should be guaranteed. Again, when private access cannot be secured, alternative improvement sites should be chosen.

GI47-4 Near and long term assessment of sediment, erosion, unwanted flora, and the progress of restoration at the construction sites should be made mandatory.

GI47-5 Both during construction and at intervals through the full term of the [illegible] control period, a private biologist should be on site, providing consultation and direction.

Paul Rawlings

GI47-1 PGT's and Altamont's proposed mitigation plans are considered to be an integral part of each company's application with the FERC, and therefore must be implemented.

GI47-2 The staff's recommended mitigation measures, and both PGT's and Altamont's proposed restoration plans, apply to both private and public lands unless expressly stated otherwise.

GI47-3 Please see discussion of this concern in revised Chapter 6.

GI47-4 The staff believes that its recommended mitigation measures, including Appendices B-1 and C-3, adequately address this concern.

GI47-5 This concern is adequately addressed by the requirement for an environmental inspector contained in Appendices B-1 and C-3.

[Robert A. Byrne Company]

ROBERT A. BYRNE CO.
RT. 2, BOX 54-0
TULELAKE, CALIFORNIA 96134
March 1, 1990

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MAR 0 6 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re. Docket Nos. CP89-460-001
CP90-1375-000

Dear Ms Cashell,

I welcome the opportunity to comment on the Draft EIS for PGT- PGE Pipeline Expansion project.

GI48-1 Robert A Byrne Co. is a ranching and farming business California Blue Tag certified seed potatoes are grown on the land where the new pipeline is proposed The proposed project will cross several miles of the Robert A. Byrne Co operation. The installation of the present pipeline created many problems which are still, thirty years later, causing much time, energy and funds to be expended. The exhaustive enviromental process which must be completed before the proposed project is installed will hopefully alleviate the enviromental problems that were caused by the existing line

Currently, the rocks which were left on or near the surface are a continual problem as heaving caused by freezing and thawing brings them to the surface where they interfere with cultural operations and harvesting causing extensive equipment breakage and extra labor. Years of attempts to remove these rocks have proved to be futile.

GI48-1 Please see response to Comment LA5-1.

The topsoil was used to bed the pipe resulting in a loss of production over the existing line. The soil from deep in the trench was placed at the surface

Nematode was carried from infected areas to clean areas because equipment was not sterilized between fields Since many of the traditional chemicals are no longer labled for use in California, steam cleaning to remove all soil particles followed by disinfecting with a chemical called nitrol PD 57 or one of similar properties and registration is necessary

It is evident from this brief description that enviromental damage was done by the last line and the potential for serious enviromental damage is high during the proposed project. With this in mind, the following areas need to be addressed by the Federal Energy Regulatory Commission:

1) All rocks that are disturbed be disposed of in a pre-arranged place or removed from the property all together,

2) All rocks from the previous pipeline installation be cleaned up and removed,

3) All equipment used on the right of way be steam cleaned and sterilized between fields (before leaving the preceding field)

4)The depth of soil that is considered topsoil that will be separated to be replaced back on the top after pipeline installation will be determined from soil survey maps and actual on the ground examinations during the trenching operations as soil depth and type varies tremendously in the same fields Soil Conservation personnel have soils data and have been requested to map the designated right of way more closely before installation

5) Any backfill material that is proposed to be used that does not originate in the same field
be tested for nematode and other soil borne contaminants that are detrimental to farming and ranching operations at PGE/PGT expense before being introduced to any land if the owner so desires

6) All personel that are required to make inspections for the completion of enviromental documents be instructed to stay within the right of way as there are no laws allowing these representatives access to lands adjacent to the right of way.

7) All personel that have business doing surveys etc. notify landowners well in advance of their proposed entry onto the land and have verifiable identification in their possession in order to make arrangements to sterilize and not impair normal operations (i.e. disturb animals)

8) PGE/PGT has demonstrated an inability to control employees of sub-contractors in a manner consistent with contractual and statutory agreements and laws Ferc should implement a mechanism at no cost to the private landowner to provide a landowners liason similar to the national forests liason. This liason would prevent the enviromental damage which occured during previous construction from reoccuring during the proposed installation by constant monitoring . The liason should have sufficent authority to cause compliance with the enviromental documents.

9.) The scheduling of the time of installation is very important since the trenching will cut some main irrigation canals and the potential impact to several thousand acres of cropland would be immense if water was interupted during the growing season which is March to October

10) Sterilize the soil with labeled chemicals during clean up to attempt to ensure soil was not contaminated during construction at owner's discretion.

11) Maintain integrity of fences by bracing before cutting and installing heavy steel gates and locks to ensure animal and ORV control.

Sincerely,

PRESTON
THORGRIMSON
SHIDLER
GATES & ELLIS

ATTORNEYS AT LAW

3200 U S BANCORP TOWER
111 S W FIFTH AVENUE
PORTLAND, OR 97204-3635
TELEPHONE (503) 228 3200
FACSIMILE (503) 248 9085

MARK F REEVE

[Preston, Thorgrimson, Shidler, Gates & Ellis]

March 4, 1991

RECEIVED BY
MAR 0 6 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Re: Docket Nos. CP89-460-001 and CP90-1375-000, PGT/PG&E Expansion Project

Dear Sir/Madam:

This firm represents certain landowners affected by the proposed project referenced above (the "project"). These comments are in response to the January 1991 Draft Environmental Impact Statement ("DEIS") for the project. We believe there are serious inadequacies in the DEIS as it relates to at least a portion of the route for the project. The portion of the route we are commenting upon lies west of the John Day River crossing in Oregon within what the DEIS calls the "John Day Canyon Variation" and the "Hannafin Canyon Alternative". The inadequacies center on: (a) the lack of appropriate consideration of alternatives, and (b) the lack of detailed analysis of impacts.

Alternatives

GI49-1 The failure to consider alternatives stems primarily from failure to obtain, analyze and evaluate evidence concerning utilization of some or all of the existing alignment. Although the DEIS states that "PGT indicated that past flooding had threatened the security of the existing pipeline, and therefore the proposed pipeline should not be built in the same area" (at 2-78) this alone is insufficient to form the basis of a reasoned rejection of the alternative. FERC cannot delegate decisionmaking to the project proponent.

GI49-2 Additionally, while flood damage apparently did occur to limited sections during the 1964 flood, a 100-year event, PGT has already taken precautionary measures to secure the integrity of the existing line. If these measures are inadequate, one must question why the existing line is allowed to remain where it is. If they are adequate, utilization of the existing right of way, which has already been subject to the environmental impacts associated with pipeline

GI49-1 The existing alignment in the vicinity was rejected in a previous EIS prepared by the U.S. Bureau of Land Management for the Alaska Natural Gas Transportation System (ANGTS). The statement referencing information provided by PGT was included in Section 2.7.2 only to provide additional facts to the reader. The FERC conducted its own analysis of the existing alignment in this area, and did not delegate its decision making to PGT. However, in light of comments received on our DEIS, we have reanalyzed our decision. Please see Chapter 2, Section 2.7.2.

GI49-2 The type of analysis required to determine whether to shut-down an entire system in order to relocate a segment of pipeline is distinct from the analysis used to determine whether a new, 42-inch diameter natural gas pipeline (operating at over 1,000 pounds per square inch of pressure) should be located in an area that is known to have reliability problems. Please see revised Chapter 2.

Ms. Lois Cashell
March 4, 1991
Page 2

construction and maintenance, is environmentally superior to either the John Day Variation or the Hannafin Canyon Alternative.

GI49-3 In preliminary discussions with representatives of the Bureau of Land Management we have learned that some federal officials are opposed to use of the existing right of way because it would entail activity in "riparian zones." We believe that this approach is based upon a limited understanding of actual conditions at the site in question, and at the very least requires public disclosure and discussion of its factual bases. In the Pine Hollow area (west of the John Day crossing), for example, there is water flow only during very limited times of the year. Although some vegetation in the immediate vicinity of the water course could be classified as "riparian" it is closely confined and does not extensively cover the existing right of way. Even where it does, there is every reason to believe that it would be more resilient and able to re-establish following construction in comparison to the more fragile vegetation and soils associated with the John Day variation and Hannafin Canyon Alternative. Finally, there have been reports that PGT is already engaging in various maintenance activities in Pine Hollow on a periodic basis in this "riparian zone", so it makes little sense to arbitrarily spread out the environmental impact of these activities into a new area as well simply because an existing area is somehow deemed sensitive.

GI49-4 Finally, it is a deficiency of the DEIS to rely (if it does indeed rely) on an analysis of an alternative contained in another document. The DEIS states (on p. 2-78) that an EIS on the ANGTS rejected use of the existing right of way. If such is the case, the current DEIS makes a mockery of the public disclosure and "opportunity to comment" provisions of NEPA and implementing regulations by failing to provide the public and affected persons with the evidence and analysis contained in that other document.

GI49-5 Impacts

The DEIS' failure to seriously consider the existing right of way, at least through the area west of the John Day River crossing, has inevitably resulted in the DEIS being deficient in its consideration of environmental impacts associated with choosing that route. The final EIS should not only consider

GI49-3 The staff has conducted two visits to the John Day Canyon area to look at both the existing alignment, PGT's proposed John Day Variation, and the Hannafin Canyon Alternative. Please see Chapter 3E for a discussion of the use of these canyons by big game wildlife species for fawning and wintering habitat.

GI49-4 Staff's reference to the ANGTS DEIS is entirely correct under the CEQ's regulations implementing the National Environmental Policy Act of 1969 (See 40 CFR 1500.4 and 1502.21). In order to provide the public with additional information on this subject, we have revised Chapter 2, Section 2.7.2.

GI49-5 The staff disagrees with the commentor's conclusion that the DEIS is insufficient. Please see response to Comment GI49-4. In addition, although the issue of choosing a new alignment through this area has been explored by PGT since 1967, and was formally analyzed in the ANGTS EIS in 1976, the staff is unaware that any member of the public has ever raised this as an issue of concern. Indeed, neither the commentor nor the clients he represents raised this issue in response to our Notice of Intent to Prepare an EIS and Request for Comment on its scope, nor was this issue raised in the scoping meeting held in Bend, Oregon in September 1989. However, to facilitate public input and comment, we have revised Chapter 2 to provide additional information on this issue.

that alternative in greater detail, but should gather, analyze and compare data and evidence of its environmental impacts in comparison to both the John Day variation and the Hannafin Canyon Alternative.

GI49-6 There are additional, and extremely serious, deficiencies in the consideration of impacts of the latter two routes. The DEIS candidly admits that "at this time, we do not have sufficient information to conclusively establish that . . . the Hannafin Canyon Alternative [is] environmentally superior to PGT's proposed route in these locations." (p. 6-12) This lack of information is highlighted by the DEIS' recommendation that "PGT conduct a detailed environmental, engineering, and economic analysis for each of these alternative routes." GI49-7 It is our client's strong suggestion that the existing right of way through Pine Hollow be included as a third alternative subject to such detailed information-gathering and analysis. It is also their view that the Hannafin Canyon Alternative will prove the most damaging of the three routes. One of our clients, Mr. Art Decker, tells us that the proposed right of way seems to pass immediately by the east end of his private airstrip and hence inevitably within extremely close proximity to his home and drinking water wells. The Hannafin Canyon Alternative appears also to pass right through the middle of some of the most valuable agricultural land in that area and is therefore likely to cause heightened environmental and economic impacts. The reason we use words like "seems" and "appears" is that at this stage the Hannafin Canyon Alternative is simply an idea drawn on a map; according to our clients, there has been no on-the-ground surveying or information gathering undertaken to date. We also believe that the inadequacy of the information is profound enough such that merely including it in a final EIS, without first informing the public and seeking public comment, would constitute a violation of the procedural requirements of applicable NEPA regulations.

GI49-8 The concerns raised about the Hannafin Canyon Alternative, ones that may be augmented when more detailed information is made available, are not meant to suggest that the John Day Variation would not itself have worse environmental impacts than use of the existing right of way. In particular, we believe that the crossing of the steep slopes in the vicinity of Hannafin Canyon will, as mentioned in the DEIS (p. 6-10), result in a high probability of landslide activity and slope instability threatening pipeline integrity (in our view,

GI49-6 The referenced statement is a prime example of the staff's attempt to actively encourage public participation and input into the environmental decisionmaking process, as required by NEPA.

GI49-7 Thank you for this information. See revised Chapter 6.

GI49-8 See response to Comment GI49-7.

GI49-8 (cont.) greater than the 100-year flood threat to the existing right of way) and result in adverse residual visual impacts and restoration difficulties. If there is any question that long term adverse visual impacts are probable, please review the enclosed photograph of another utility right of way in the immediate vicinity illustrating the scarring and visual degradation of the area that is likely to occur.

In the area discussed in the foregoing comments, the low rainfall and sparse vegetation existing on often extremely thin topsoil all make for a very fragile ecosystem, which should not be disturbed unless every available alternative and its impacts has been adequately considered. We encourage FERC to promptly and comprehensively address the substantive and procedural inadequacies identified herein.

Very truly yours,

Mark P. Reeve

MPR
cc: Mr. Mark C. Kalpin

[Richard and Sharlene Grantham]

RECEIVED BY

MAR 06 1991

ANALYSIS BRANCH

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Mark C. Kalpin, Environmental Compliance Branch, Room 7312, at the same address.

All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Bonners Ferry, ID

Commenter's Name and Address: Richard + Sharlene Grantham
HCR 85 Box 70
Bonners Ferry, Id 83805

To Whom it May Concern

We own property in Sec 3 T.S. 64N R2E and about 1300' of pipeline right away goes through our property. We ask two things from PG+E:

GI50-1 (1) Our driveway for a rental house crosses the right away. It is the only access, Keep it open.

GI50-2 2. The ~~sod~~ top soil is only a few inches deep in that area and very rocky under that top soil. Replace top soil over both lines and ~~level~~ Level ground — NO TREES REQUIRED.

GI50-1 PGT has proposed to work with the landowner to ensure that adequate access is maintained when crossing private roads.

GI50-2 Appendix B-1 specifies the land use locations where the staff recommends the use of topsoil segregation during the proposed construction. Segregation of topsoil outside of these areas, or the replacement of topsoil over PGT's existing pipeline, is a matter for negotiation between the landowner and PGT.

KOOTENAI TRIBE OF IDAHO
P.O. BOX 1269
BONNERS FERRY, IDAHO
83805
208/267-3519 or
208/267-5223

RECEIVED BY
MAR 06 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

February 28, 1991

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Docket No. CP89-460-001 - PGT/PG&E Pipeline Expansion Project Draft Environmental Impact Statement (DEIS)

Dear Ms. Cashell:

The Kootenai Tribe of Idaho has carefully reviewed the DEIS on the above project and has the following comments:

GI51-1 1. Alternative Route, Loop 1: The Tribe is uncomfortable with this alternative, first because of the presence of several known graves and a number of cultural sites along the route; and second, because of the impact on wetlands in the Round Prairie area. We, therefore, oppose this alternative.

GI51-2 2. Moyie River Route, Loop 1: We regard this route as the "lesser evil"; Provided, that the mitigation measures outlined in the PGT/PG&E document: Moyie River Crossings: Construction, Mitigation, and Restoration Plan are carried out to the letter, and maintenance is continued as long as necessary after construction is complete. The Tribe has a vested interest in the water quality and fisheries of the Moyie River, and this Treaty Right must be protected.

GI51-3 3. Cultural Resources, Loop 1:

(a) Cultural Resources: Chapter 3M, DEIS. We understand that this DEIS was prepared before the archaeological assessment report had been completed. We object to the implication in the DEIS that the area in question was used, only occasionally, by peoples now gone. In fact, the CRI work done last summer by Woods Cultural Resources and their subcontractor demonstrated the accuracy of Kootenai Oral History. Even with the limited work done last summer, two new, significant sites were located along the right-of-way. Further work will be done this summer.

[Kootenai Tribe of Idaho]

GI51-1 Thank you for your input.

GI51-2 See response to Comment GI51-1.

GI51-3 As part of the continuing compliance process pursuant to Section 106, consultation will continue to identify areas which contain sites and/or possible burials. Any previously unidentified sites/burials encountered during construction will be treated in a manner consistent with procedures determined in consultation with the Tribe. See revised Chapters 3M and 4M.

GI51-3 (cont.) According to Kootenai Oral History, the Tribe has been here since the beginning of time, and the Moyie River Valley has been a hunting and subsistence area and travel corridor for millennia. As far as we can determine, no scientific evidence has been unearthed to disprove this. It is therefore highly probable that the existing pipeline has already disrupted some sites and the proposed construction will disturb still more. This needs to be recognized in the Final EIS.

GI51-4 (b) Burials: The Tribe has very serious misgivings about the Company's plans to disinter and rebury any funerary remains encountered during or before construction. The Tribe has very strong, important religious beliefs concerning their dead and the belongings of their dead, one of which is that once buried, they should not be meddled with.

Accordingly, the Tribe would rather require the Company to change its route or site location if funerary remains are discovered during or before construction.

GI51-5 (c) Other Cultural Resources: Dissociated Human Remains. The Tribe objects very strongly to the Company's assumption that "dissociated human remains" need not be treated in the same manner as "intact human remains", but may be studied and handled. All human remains must be treated the same way.

GI51-6 (d) Cultural Resources: Non-Burial Remains. It is highly probable that cultural remains other than funerary will be disturbed, and some of these will be objects of major religious significance. The Tribe requires that the Company employ a Tribal Monitor at all times wherever earth-disturbing activities are going on. Equally important, the Tribe requires that the Company's archaeologists allow our Tribal Monitors to screen all cultural material they discover and remove, for proper care according to our religious significance. Such articles should not be carted away to laboratories and repositories for "study".

GI51-4 PGT has indicated that all efforts will be made to treat funerary remains, throughout the project, in a manner consistent with Tribal directives.

GI51-5 The FERC staff acknowledges the Tribe's concerns regarding treatment of "dissociated human remains." PGT is presently formalizing an M.O.U. which will establish the manner in which these remains are treated. The M.O.U. will be reviewed by the FERC staff.

GI51-6 PGT has indicated that it will consult and coordinate with the Tribe to address the Tribe's requirements regarding monitoring and treatment of objects with religious significance.

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
Page Three
February 28, 1991

GI51-7 4. Cultural Resources, Loop 2: This section of the pipeline traverses both Kootenai Aboriginal Territory and territory shared by the Kootenai, Kalispel and Pend Oreille Tribes.

We are engaged in discussions with the Kalispel Tribe to coordinate our monitoring activities on Loop 2 and expect no difficulties, since our concerns and objectives are the same. Therefore, our comments in Section 3 of this Response apply to Loop 2 as well.

Yours very truly,

KOOTENAI TRIBE OF IDAHO

Margaret Friedlander
Margaret Friedlander
Tribal Rights Protection Office

ATTEST:

Raymond Abraham
Raymond Abraham, Chief
Kootenai Tribe of Idaho

cc: Mr. Marc C. Kalpin

GI51-7 Comment accepted. See revised Chapters 3M and 4M.

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MAR 0 6 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT ANALYSIS BRANCH

Feb. 27, 1991
Jan M. Rose, Vice Pres.
N. Idaho Audubon Society
HCR 62, Box 140
Moyie Springs, ID
83845

Mark Kalpin
Federal Energy Reg. Commission
825 N. Capitol St., N.E.
Washington, D.C. 20426

Dear Mr. Kalpin,

I made a brief personal statement at the Public Forum in Bonners Ferry on 2-26-91. Thank you for that opportunity.

I am now writing comments to share more specific details and am also speaking for the North Idaho Audubon Society.

GI52-1 I strongly encourage that all environmental concerns addressed in the Draft Environmental Impact Statement (DEIS) be included in the final EIS and in the very last agreement that F.E.R.C. presents to Pacific Gas Transmission and PG&E and Altamont Gas Transmission Co. in order for them to become licensed to do this project.

GI52-1 Revisions to the DEIS have been made in response to comments received from federal, state, and local agencies, as well as private individuals and organizations.

Page 2 - Rose,
Audubon

As a group we are not opposed to this pipeline and a large part of the reasons for this is because of the good mitigation and restoration plans that are outlined in the DEIS. However, there are some potential problems that I feel need addressed.

1) Agreements with the private land owners along the pipeline route have not yet been worked out. At least two of these owners have not even been contacted and yet plans for their properties are included in the DEIS — this is from statements + conversation at the public meeting 2-26-91. If access to any GI52-2 of the sites for fisheries improvement as well as structures for "catching" silt and sedimentation is not granted by private land owners or agency land owners then I request that alternate sites be chosen and worked out. The Forest Service owns only about 25% of the property along the route. If only 25% of the projects are worked out this is not enough!

GI52-2 Thank you for your comment. Please see revised Chapters 4C, 4F, 5 and 6.

Page 3 - Rose,
Audubon

GI52-3 2) Sedimentation of the river bed and collection of silt and sediment in the area behind the Moyie River dam,

GI52-4 3) erosion along the construction sites,

GI52-5 4) introduction of noxious weeds, and

GI52-6 5) displacement and possible destruction of sensitive animal and plant species are all very important issues that need to be addressed. Have you done any sensitive plant surveys?

GI52-7 6) Restoration of disturbed areas should include replacement of topsoil and plantings of *native species only*. Enclosed is a list of sources for native reclamation grasses, wildflowers, shrubs, and trees.

GI52-8 7) A plan for monitoring Fisheries and Wetlands/+ Forest is talked about in the DEIS and was expressed verbally at the Public Meeting in conversation. I want to see this monitoring done during construction and afterwards *on site* for 3-5 years at a minimum.

GI52-3	The staff's experience has shown that implementation of our "Stream and Wetland Construction and Mitigation Procedures" (Appendix C-3) would minimize erosion and sedimentation to the maximum extent practicable.
GI52-4	The staff believes that this concern is adequately addressed in Chapters 4B and 6, as well as Appendices B-1 and B-2.
GI52-5	See response to Comment GI52-4.
GI52-6	Please see revised Chapter 4E.
GI52-7	See response to Comment GI52-4.
GI52-8	Thank you for your comment.

Page 4 - Rose,
Audubon

Unsuccessful plantings should be replaced and any noxious weeds removed in an ecologically safe manner.

GI52-9 8) Who is going to coordinate all these activities with the various agencies (Forest Service, Bureau of Land Management, etc.) and private land owners? Not a small task. I request you designate someone or more.

GI52-10 9) In regards to the proposed structures in the river bed itself, please construct these in a manner that will not jeopardize the safety of rafters - both experienced & novice, boaters, tubers, fishermen, etc.

Thank you for the opportunity to comment and be aware of all these plans and proposals.

Sincerely,
Jan M. Rose
Jan M. Rose
Vice-Pres. N.Id. Audubon

GI52-9 This concern is addressed in both Appendix B-1 and Appendix C-3, which require each project applicant to utilize an environmental inspector.

GI52-10 Thank you for your comment. This concern has been adequately addressed in PGT's proposed fishery enhancement plan.

Page 5 - Rose,
Audubon

Sources for Native Plants

This is not a complete list but it contains several options and reliable sources.

Kootenai Valley Nursery Growers
P.O. Box 267
Bonners Ferry, ID 83805
(208) 267-5753 trees, shrubs, perennials

Lawyer Nursery, Inc.
950 Highway 200 West
Plains, MT 59859
(406) 826-3881 seeds, shrubs, trees

Granite Seed (801) 768-4422
1697 West 2100 North (801) 531-1456
P.O. Box 177
Lehi, Utah 84043 reclamation grasses,
herbaceous annuals & perennials

Plants of the Wild
P.O. Box 866 (509) 284-2848
Tekoa, WA 99033 trees, shrubs, wild flowers

[Lawrence F. Lear]

25 Febuary 1991

TO: Mark C. Kalpin

FROM: Lawrence F. Lear
PO Box 643
Condon, OR 97823

SUBJECT: CRP Lands on Project Rightaway (Docket No. CP89-460-001)

RE: Tele Conversation between Lear and Kalpin

As a property owner on which Pacific Gas Transmission Co. has an easement for a transmission line with rights of access I am concerned how this project will affect my Conservation Reserve Program (CRP) contract. Copy of this contract with the U.S. Department of Agriculture Commodity Credit Corporation (CCC) is attched.

Specifically, the easement goes through CRP land which is subject to the terms and conditions of the contract. Under that contract I have agreed to maintain the vegative cover and the required conservation practices on the CRP land and take other actions required by CCC to achieve the reduction in GI53-1 erosion necessary to maintain production capability of the soil throughout the contract period (1987 to 1996). Establishment of cover according to requirements by CCC has been completed on the specific land and it has been certified by the local Soil Conservation Service (SCS). The cost to repair and re-establish required cover is the responsibility of the landowner. To my knowledge the project has not provided for any means to prevent costly measures for the landowner to comply with the CRP contract. Local SCS officials are not aware of any provisions concerning CRP lands.

Any information or assistance concerning this matter would be appreciated.

Thank You

ATCH: CRP Contract
CC: _Federal Engergy Regulatory Commission - Cachell
_Gilliam Country SCS

GI53-1 Thank you for this information. The staff has addressed your concern in revised Chapter 4B, and has included a recommended mitigation measure in Chapter 6 to minimize impacts associated with construction of the PGT Project across land currently under contract with the Conservation Reserve Program.

McCAMPBELL
P.O. BOX #240
LOS GATOS, CA 95031
408-353-4109

[Bruce L. McCampbell]

Feb 21,1991

Mr Mark Calpin
Room 7312
Environmental Compliance Branch
O P P R Federal Energy Regulatory Commission
825 N Capitol Street
N E Washington, D C 20426

RE PGT-PG&E Pipeline Expansion Project

Dear Mr Calpin,

GI54-1 My family owns the majority interest in a 2000 acre ranch in Shasta and Tehama Counties, CA , through which passes approximately 2 miles of the PGT-PG&E Natural Gas Pipeline The assessor parcel numbers are Shasta County, 704-090-07, 704-230-13,14,15,16, 704-240-01,02, Tehama County, 009-020-031, 009-020-101, 011-010-151, and 011-010-161 As property owners, we have concerns about the Expansion Project, how it will impact our property as a whole, and specific areas of special consideration

On February 16, 1991, I met on the property with Nancy Reeves, Senior Right of Way Agent for the project, to discuss these concerns and potential impacts An outline of these items follows below, please find enclosed a map labeled to identify specific areas, listed from north to south

EROSION CONTROL:

The construction of the original pipeline created erosion problems on steep slopes. We would like to see these slopes restored to original natural condition and care taken to avoid such erosion after this new construction.

SPRINGS:

There are 2 important natural springs near the Pipeline @ the N E property line The northerly spring forms a surface pond and is used for livestock watering, it is approximately 500 feet from the Pipeline and hopefully out of harm's way However, the second spring is the only water supply for the Ranch house and livestock corrals It is a lava- tube type spring located approximately 60 feet west of the proposed new Pipeline and has been in use at least 55 years We are concerned that the close proximity of trenching and blasting could disrupt the flow or collapse the spring completely If the spring is damaged we would expect an alternate and equivalent water source be provided Also, a 2 inch water line to the Ranch house crosses the Pipeline in this vicinity and will be encountered during new construction

ROAD ACCESS.

All ranch roads used for construction vehicle traffic should be maintained and repaired

BRIDGE.

Due to the PG&E Coleman Siphon and Coleman Canal, vehicle access to the Southeast corner of the property is impossible A bridge spanning the Coleman Canal at the headwall of the Siphon pipe served to provide vehicle access but was removed by PG&E without notice in the early 1980's It is assumed that a new bridge to accommodate the Natural Gas Pipeline Project will be built at the same location We request that this bridge be left in place to reestablish our access to our Southeast property

GI54-1 See response to Comment LAS-1.

WETLAND:

The Natural Gas Pipeline passes through approximately 1/4 mile of year-round wetland area with diverse plant and animal life. We request that special consideration be given this area concerning construction techniques, ground disturbance, and post construction revegetation.

WALL:

A stone wall approximately 1/2 mile long and 12 feet tall is penetrated by the Pipeline. As far as we know, only conflicting verbal history exists as to it's original purpose, date of construction, etc. Approximately 90 lineal feet of the East end of the wall was demolished during the original pipeline construction. We request that special consideration be given to the history of this structure and that no further damage be inflicted.

TRESPASS ACCESS:

The Pipeline crosses Battle Creek at a point where we also own a Tehama County parcel south of Battle Creek. The Pipeline right of way crosses a county road a short distance south of this area. New construction and freshly cut construction access roads will lead many fishermen, hunters, off-road vehicle users, etc. to attempt to penetrate this "new" area. We request that special consideration be given to this concern and that methods to prevent trespass be undertaken or installed.

GENERAL CLEAN-UP:

Debris and garbage such as 55 gallon drums, 5 gallon cans, etc. still remain on the property along the Pipeline right of way as a result of the original construction. We request that all such debris and garbage from both construction periods be removed after construction.

GENERAL GRADING AND REVEGETATION:

The original pipeline construction left many piles of rocks and boulders strewn about in haphazard fashion, leaving quite a visible landscape scar that has not significantly improved even after many years. We would like to see the right of way, after construction, be graded and revegetated to approximate the natural and original condition prior to the first construction period.

LIVESTOCK:

The entire property is used for cattle and sheep grazing during the period of October through May. If any of the construction occurs during this time frame, we request that safety barriers and fenced containment be provided to prevent loss of livestock.

By way of scheduled appointments, we will allow access onto the property for the study or evaluation of these concerns, and of course will cooperate in allowing necessary access during the construction period. We thank you for giving our requests and concerns serious consideration, and hope to see a successful and acceptable completion of this construction project.

Sincerely,

Bruce L.

Bruce L. McCampbell

cc

Nancy Reeves

[Kendra Vagt]

Pacific Gas Transmission Company) Docket Nos.
Altamont Gas Transmission Company) CP89-460-001
CP90-1375-000

This page is for **WRITTEN COMMENTS** on the PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (EIS). These comments will be used by the FERC staff to revise and refine the analysis prior to publication of the Final EIS. Comments may be delivered to the FERC representative conducting the meeting or addressed to the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE, Washington, DC 20426. A copy of any written comments addressed to the FERC Secretary should also be sent to Mr. Mark C. Kalpin, Environmental Compliance Branch, Room 7312, at the same address.

All comments must be received no later than Monday, March 4, 1991. Comments received after March 4, 1991 will not be addressed in the Final EIS.

Meeting Location: Bend, OR

Commenter's Name and Address: Kendra Vagt
61976 Bronco Lane
Bend OR 97702

GI55-1 Need locate to build a pond.

GI55-2 Previous rock berms not removed.

GI55-3 Re-seeded for pasture.

GI55-1 A landowner's use of PGT's current easement to build above-ground structures or watering ponds is a matter of negotiation between the landowner and PGT.

GI55-2 The staff is aware of this problem. Please see revised Chapters 4B and 6.

GI55-3 This concern has been addressed in Chapters 4B and 6, and Appendix B-1 and B-2.

Altamont Comments

ALTAMONT GAS TRANSMISSION COMPANY

Page

AL1 Altamont AL-1

AL2 Altamont's Response to Appendix A AL-39

AL3 Altamont's Response to Appendix B AL-70

SIDLEY & AUSTIN
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

[illegible]

1722 EYE STREET, N.W.
WASHINGTON, D.C. 20006
TELEPHONE 202 429-4000
TELEX 89-463
FACSIMILE 202 429-6144

[illegible]
ASSOCIATED OFFICE
[illegible]

March 4, 1991

Hand Delivery

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
Room 3110
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Comments of Altamont Gas Transmission Company on Draft Environmental Impact Statement for the PGT/PG&E and Altamont Natural Gas Pipeline Projects; Docket Nos. CP89-460-001 and CP90-1375-000

Dear Ms. Cashell:

Enclosed please accept for filing the comments of Altamont Gas Transmission Company ("Altamont") on the Draft Environmental Impact Statement ("DEIS") for the PGT/PG&E and Altamont Natural Gas Pipeline Projects.

In accordance with the Commission's notice requesting comments on the Draft Environmental Impact Statement, we are also sending copies of our comments to all parties in these procedings and Mr. Mark C. Kalpin and Mr. Laurence J. Sauter, Jr., environmental project managers for the respective projects.

Sincerely yours,

Peggy L. O'Brien
Attorney for Altamont
Gas Transmission Company

Enclosure

cc: All Parties
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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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Pacific Gas Transmission Company) Docket No. CP89-460-001

Altamont Gas Transmission Company) Docket No. CP90-1375-000

COMMENTS OF ALTAMONT GAS TRANSMISSION COMPANY ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PGT/PG&E AND ALTAMONT NATURAL GAS PIPELINE PROJECTS

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March 4, 1991

Addendum
To
Appendix A

Comment 6-29

Although all four route variations are feasible from an engineering and construction perspective, they all are considerably more expensive than the proposed route. The capital cost of the proposed route from MP 428.0 to 620.0 is $153,991,319. The corresponding capital costs for the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 Variations are $185,917,016, $184,713,461, $194,025,533 and $160,932,110, respectively, exclusive of O&M capital, pre-permit, AFUDC and line pack. The proposed route also involves less operating costs on an overall basis by virtue of being shorter and not requiring additional fuel gas to power the seventh compressor station. Based upon these advantages, Altamont reaffirms that its proposed route is strongly preferred.

See response to Altamont's Appendix A Comment 125.

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COMMENTS OF ALTAMONT GAS TRANSMISSION COMPANY ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PGT/PG&E AND ALTAMONT NATURAL GAS PIPELINE PROJECTS

Altamont Gas Transmission Company ("Altamont") hereby submits its comments on the joint Draft Environmental Impact Statement ("DEIS") proposed by the Commission for the Altamont Pipeline Project[1] and the pipeline project jointly proposed by Pacific Gas Transmission Company ("PGT") and its parent, Pacific Gas & Electric Company ("PG&E").[2]

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[1] On July 21, 1989, Altamont filed with the Commission an application in Docket No. CP89-1851-000 under the Commission's traditional certificate procedures for authority to construct its proposed pipeline from the Montana-Canada border to Opal, Wyoming. At the terminue of its system at Opal, Altamont would interconnect with the pipeline system owned and operated by Kern River Gas Transmission Company ("Kern River"), which is constructing a pipeline system from Opal to southern California. On May 15, 1990, Altamont filed an application under the Commission's optional certificate procedures in Docket No. CP90-1375-000 for authority to construct and operate its proposed project.

[2] On December 20, 1988, PGT filed an application with the Commission (Docket No. CP89-460-001) for certificate authority to construct and operate a pipeline system from the Canadian border to the California/Oregon border, near Malin, Oregon. Shortly thereafter, on April 14, 1989, PG&E, filed with the California Public Utilities Commission ("CPUC") an application for authority to construct and operate pipeline facilities within the State of California to transport the Canadian natural gas delivered to Malin, Oregon by PGT to Kern River Station in central California.

PRELIMINARY STATEMENT

AL1-1 The DEIS presents an evaluation of both the Altamont Project and the PGT/PG&E project and concludes that, with the implementation of certain necessary mitigation measures, both projects can be built in an environmentally sound manner. The DEIS also "incorporates by reference" some of the findings from the Final Environmental Impact Report ("FEIR") prepared for the PG&E portion by the California Public Utilities Commission ("CPUC"), a decision to which Altamont generally does not object. By and large, the DEIS does a good job of evaluating each of the two projects and identifying certain mitigation measures that must be taken.

For its part, Altamont agrees with most of the DEIS' analysis of its project and some of the mitigation measures suggested by the DEIS. However, the DEIS overstates certain of the identified impacts of Altamont's project. For example, the DEIS overstates the number of acres of wetlands that the pipeline would cross and the project's impact on visual resources. A more detailed discussion of these and certain additional impacts is set forth below and in Appendix A.

In addition, certain mitigation measures recommended in the DEIS for the Altamont project are unnecessary. These include the measures requiring directional drilling of the Missouri River and 70% revegetation cover. The DEIS' discussion of scour,

AL1-1 Thank you for your comment. The staff will respond to the specific comments contained in Appendices A and B which deal with the DEIS. The staff will not respond to Appendix C (which are comments on the CPUC's FEIR) for the reasons given in our response to Comment LA5-1. We will also not waste staff resources responding to Altamont's comparison in Appendix D. If the reader so chooses, they may use Altamont's comparisons or conduct their own utilizing more recent data reflected in the FEIS. We will of course print Appendices C and D as information to the reader.

AL1-1 (cont.) particularly its findings regarding "local scour," as well as the various mitigation measures it proposes in this regard also are inappropriate. These errors should be corrected so that the EIS paints a more accurate picture of the Altamont project and requires only those mitigation measures that are truly necessary to reduce the impacts of the project on the environment.

The conclusions in the DEIS concerning the PGT/PG&E project, however, are more suspect. For example, the DEIS' evaluation of the impact of the PGT/PG&E project on several species of wildlife is misleading and inadequate in several respects. Deficiencies also exist in the DEIS' analysis of the impacts on fisheries and fish species, forested lands and wetlands. The DEIS also understates the geological risks presented by the project. A more detailed discussion of these and certain other matters pertaining to PGT/PG&E is set forth below and in Appendix B.

The DEIS also relies on the FEIR's flawed findings with respect to wetlands, agricultural, orchard and vineyard resources, land use, soils and air quality resources. As explained in greater detail below, as well as in Appendix C, the Commission must take steps to remedy these shortcomings in the final EIS.

Finally, the DEIS makes no direct, systematic comparison of the environmental impacts of the Altamont project

AL1-1 (cont.) with the entire PGT/PG&E project. Such a comparison is mandated by CEQ regulations, legal precedent and prior Commission practice, and is essential to provide a "clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14. As a result, the EIS should include an analytical comparison of the environmental impacts of the two projects. If such a comparison were made, it would show that the Altamont project is clearly superior to the PGT/PG&E project on an environmental basis. Indeed, Altamont's analysis in this regard -- which is detailed in Table I and explained in Appendix D -- shows that the Altamont project is clearly superior in nine of the thirteen categories reviewed.

COMMENTS

I. THE DEIS OVERSTATES THE ENVIRONMENTAL IMPACTS OF THE ALTAMONT PROJECT.

The DEIS properly concludes that the Altamont project "could be constructed and operated in an environmentally acceptable fashion." DEIS at 6-29. On the other hand, the DEIS incorrectly assesses the environmental effects of, makes several incorrect assumptions about, and proposes unnecessary or unreasonable mitigation measures for, the Altamont project. These errors are detailed in Appendix A; the most significant errors are highlighted below.

AL1-2 A. **Wetlands**. The DEIS overstates the number of acres of wetlands impacted by the Altamont project, concluding that the pipeline would cross 255 acres of wetland and riparian habitat. DEIS at Table S-3. As the DEIS itself concedes, the methodology underlying its findings "tends to overestimate the extent of jurisdictional wetlands by using only [a] vegetation parameter." DEIS at 3E-2. As a result, the mitigation costs associated with the Altamont project also are overstated.[3] The extent of this error should be determined and identified in the EIS.

B. **Visual Resources**. The DEIS also overestimates the impact of the Altamont project on visual resources. For example, AL1-3 the DEIS incorrectly classifies substantial portions of MP 423.9-510.9, MP 510.9-524, and MP 561.0-613.3 as Class II areas, although the Bureau of Land Management ("BLM") has not classified these portions as Class II areas. Consequently, these areas should be identified correctly as Class IV, and mitigation measures should be tailored accordingly. In addition, the DEIS AL1-4 fails to recognize that Altamont's route parallels an existing pipeline for a portion of the route between MP 423.9-510.9, meaning that the impact on visual resources there would be insignificant. The DEIS thus overstates the impact on visual resources for this portion of the Altamont project. Similarly, the DEIS does not take into account that Altamont now plans to

AL1-2 Comment noted. A more precise estimate would require full field delineations of wetlands, which we only require to be performed prior to construction.

AL1-3 We agree that this entire interval is not VRM Class II, although discrete portions are. See response to Altamont's Appendix A Comment AL2-111 below. Our visual resources analysis has been substantially revised.

AL1-4 Because Altamont's realignments were filed so late in the process, they could not be entirely reflected in the DEIS. The FEIS has been revised to reflect Altamont's realignments. Boring the Oregon-Mormon Trail at its intersection with SR 28 is noted in FEIS Chapter 4M.

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[3] If the methodology applied to the PGT/PG&E project were employed with respect to the Altamont project, the estimate of the number of acres of wetlands would be even further reduced. As explained below, however, that method is wrong.

bore underneath the Oregon Trail at its intersection with SR 28, thereby minimizing the impact on any visual resources associated with the Trail.[4] These errors regarding the impact on visual resources caused by the Altamont project should be corrected.

AL1-5 C. Directional Drilling. Altamont should not be required to undertake directional drilling at its Missouri River crossing, as proposed by the DEIS (at 4L-7, 4F-8). Indeed, the Missouri River is ideally suited to the conventional open-cut technique, a method that would not have an adverse impact on the pallid sturgeon, the impetus for the DEIS' suggestion for directional drilling. In fact, no pallid sturgeon have been observed in the area of the proposed crossing since 1978 (Clancey, P., 1991, Paddle Fish and Pallid Sturgeon Spawning Habitat Study in the Area of the Altamont Gas Transmission Company's Proposed Pipeline Crossing of the Wild and Scenic Missouri River). AL1-6 If, however, Altamont identifies that such fish are located at the site of the proposed crossing, it will take appropriate measures to minimize any impacts. Furthermore, directional drilling is not superior to conventional crossing techniques in reducing impacts on visual resources. The proposed crossing is adjacent to private lands; it is hardly "pristine." Moreover, to reduce visual impacts, Altamont intends to remove as few trees as possible by carefully selecting its crossing point

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[4] Indeed, the Commission should ensure that the entire EIS reflects more accurately Altamont's proposed reroute for the South Pass area filed with the Commission on November 28, 1991. At present, the DEIS discusses this reroute only in shaded footnotes.

AL1-5 We disagree. Our analysis clearly supports our determination that in order to avoid potential adverse impact on the pallid sturgeon, a federally listed species, Altamont must directionally drill its proposed Missouri River crossing.

AL1-6 To date, Altamont has failed to identify satisfactory "measures to minimize any impacts" to the federally-listed pallid sturgeon. Altamont's proposed construction and mitigation measures, as summarized in its comments here, would result in an adverse impact on this species. Unless this adverse affect were avoided, we would be required to initiate formal consultation with the U.S. Fish and Wildlife Service.

and also intends to restore the banks of the River, just as it plans to do at its Yellowstone River crossing. These precautions will allow a conventional open-cut crossing to be used without causing harm to the environment.

AL1-7 D. Scour Depth. The DEIS' estimates of scour in major rivers crossed in Montana are inaccurate because they were determined from geomorphically different parts of these rivers. DEIS at 3C-11 to 3C-12. In fact, scour depths should be significantly less than the DEIS estimates because Altamont intends to return the river and stream beds to their original configuration. As a result, once pipeline construction is complete, there should be no obstructions to cause local scour, and general scour, which is dependent on channel slope, the nature of the bank and over-bank areas, as well as bed material, size and armoring, should be much less than the DEIS suggests. In addition, the placement depths proposed by the DEIS would, in many cases, result in magnification of the impacts to the stream channel, banks and water quality. Reduced burial depths, however, would result in much less disturbance to the streams. In any event, appropriate placement depths for the crossings of Missouri and Yellowstone Rivers should be based upon site-specific scour depth studies, instead of upon the DEIS' single, uniform standard which is based on irrelevant and inapplicable data.

AL1-7 Scour depth information was provided by the State of Montana, and would be the subject of stream crossing approvals issued by Montana.

AL1-8 E. **Revegetation**. The DEIS also errs in requiring Altamont to provide a 70 percent revegetation cover for its route, a standard that is too high in light of the limited rainfall in the area of the project. For the same reason, the DEIS' suggestion for a one-plant-per-square-foot standard is not appropriate for some of the badland-type areas crossed by Altamont's route. To the contrary, the measures required for revegetation should instead be based on comparison with similar, adjacent vegetation after several growing seasons and consultation with relevant agencies.

In conclusion, the DEIS overstates some impacts of the Altamont project and requires some mitigation measures that are inappropriate and unnecessary. As modified to correct these deficiencies, the EIS would fairly describe the limited environmental effects of the project and would set forth appropriate mitigation measures.

II. THE DEIS UNDERSTATES THE ENVIRONMENTAL IMPACTS OF THE PGT/PG&E PROJECT.

The CPUC noted and the DEIS identifies a number of problems with the PGT/PG&E project and both have recommended mitigation steps that will cost significantly more than the $40 million estimated by the CPUC.[5] According to the DEIS, the PGT

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[5] The CPUC imposed 201 mitigation measures for the PG&E portion of the project that it estimated would cost at least $40 million. These measures include rerouting, time restrictions on (continued...)

AL1-8 As is clearly stated in our Erosion Control, Revegetation, and Maintenance Plan, surrounding vegetative cover may be used as a guide for determining revegetation success.

portion will require numerous mitigation measures to reduce the impact of the project in Idaho, Washington and Oregon. Some of the most significant measures include (1) development of a site-specific construction, restoration, and monitoring plan for construction in the John Day Canyon in Oregon and each crossing of the Moyia River; (2) implementation of measures to reduce the impacts caused by construction of the pipeline within 50 feet of residences; and (3) installation of noise reduction control technology at Compressor Station 3 in Idaho to reduce the impacts caused by the expansion. These measures should cost at least as much as those required in California.

AL1-9 Although these mitigation measures would undoubtedly improve the project from an environmental perspective, they fail to remedy a number of serious problems. The most significant errors relate to the DEIS' analysis of the project's impact on (1) special status wildlife species, (2) fisheries and fish species, (3) forested lands, (4) wetlands and (5) geological risks. These shortcomings, which are discussed below and in greater detail in Appendix B, require additional mitigation measures for the PGT portion of the project.

A. Special Status Wildlife Species. The DEIS' evaluation of the impact of the PGT/PG&E project on special

AL1-9 We disagree. Please see our responses to Altamont's Appendix B comments.

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[5] (...continued) construction, implementing an erosion control and restoration plan and requiring control technologies to reduce air and noise pollution at compressor stations. See Pacific Gas & Electric Co., Dkt. No. 90-12-119, at 168 (Dec. 27, 1990).

AL1-10 status wildlife species is misleading and inadequate in several respects. First, the PGT/PG&E project would disturb at least 329 acres of potential grizzly bear habitat in Idaho. DEIS at 4E-12. The DEIS fails entirely to assess the impact associated with these disturbances, other than to note that pipeline workers might be forced to shoot some of these endangered animals. At the very least, more appropriate mitigation measures should be required to protect the habitat of this unique species. Id.

Second, the DEIS does not address the consequences of the PGT/PG&E project on the habitat of the long-billed curlew in Washington. Construction would disturb 110 acres of curlew habitat in Washington and 277 acres in Oregon. DEIS at 4E-29 to 4E-30, 4E-38. As the DEIS notes, "[t]he distribution of nesting habitat for long-billed curlews in the State of Washington is extremely limited," and construction of the PGT/PG&E project would destroy nests, eggs and young. Id. To mitigate this impact, the DEIS "recommends" that PGT not construct during the
AL1-11 nesting season of May 1 to August 1. Id. At a very minimum, this recommendation should be a mandatory request. Otherwise the DEIS may permit the potential loss of critical habitat for this protected species.

AL1-12 Third, the California portion of the project would disturb 442 acres of potential habitat of the San Joaquin kit fox. The kit fox, which has been observed in the area of PG&E's proposed right-of-way, is a federally listed endangered species.

AL1-10 PGT's proposed facilities do not occur within any grizzly bear unit identified in the grizzly bear recovery zone. See our response to the comments of the U.S.Forest Service and revisions to Chapter 4E. In addition, we have determined that construction and operation of the PGT Project would not affect the grizzly bear.

AL1-11 The Commission will decide whether it is appropriate to require the implementation of any or all of our recommended mitigation measures.

AL1-12 Comment noted. See revisions to Chapters 3E, 4E and 6.

The DEIS concedes: "Construction activities could destroy natal dens located in the right-of-way or disturb foxes that are denning adjacent to the right-of-way. Construction activities would also disturb rodent populations in the right-of-way and prey species available to kit foxes." DEIS at 4E-45. The DEIS, however, fails to assess adequately the impact of these activities or suggest appropriate mitigation measures to reduce sufficiently this impact.

AL1-13 B. Fisheries and Fish Species. The number and quality of rivers and streams that the PGT/PG&E project would cross[6] would have significant impacts on a substantial number of fisheries and fish species, including seven federally protected species. DEIS at S-2 and 6-1. The CPUC concluded that stringent measures were necessary to mitigate the impact of the PG&E portion of the project on four of these species.[7] The DEIS, on the other hand, fails to note these significant impacts, which should be addressed in the final EIS. At a minimum, restrictions should be placed on the timing of PGT/PG&E's construction,[8] and reroutes or other special precautions should be required during construction to avoid the federally protected species.

AL1-13 The CPUC's EIR utilized significance criteria which differed from the criteria applied in our DEIS. Because of this fact, we have not adopted the CPUC's determinations of significant impact. We believe that our discussion of potential impacts in FEIS Chapter 4F is accurate and that our recommend mitigation measures in FEIS Chapter 6, Appendix B-1, and Appendix C-3 are adequate to mitigate potentially significant environmental impacts.

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[6] Construction of the PGT/PG&E pipeline would be expected to involve at least 295 crossings of rivers or streams. DEIS at S-2 and 6-1.

[7] *See* *Pacific Gas and Electric Co*., D. 90-12-119, slip op. at B-45.

[8] *See* Appendix B for more appropriate construction windows that take into account specific rivers and streams.

AL1-14 C. Forested Lands. Construction of the PGT/PG&E project would require the removal of 2,631 acres of forest (DEIS at S-2 and 6-1), resulting in a very significant environmental impact. For example, this denuding would cause erosion and surface water runoff to nearby streams and rivers. In addition, multiple gaps in protective cover would be created, thus depriving large animals of needed cover and creating a significant impact on visual resources. DEIS at 5-1. Significantly, most of this permanent right-of-way will not be reforested. Moreover, because much of these forested areas have already been disturbed by PGT's original pipeline, the expansion project will create serious cumulative impacts on these forest, wildlife and visual resources. Id.

AL1-15 Despite these adverse effects, the DEIS suggests that the cumulative impact caused by the PGT/PG&E project will not be significant because the forest will revegetate. Id. This conclusion is erroneous. While the forest may eventually revegetate, that process will not be completed, in most instances, for up to 25 years. DEIS at 4E-5. A quarter century of depleted forest and wildlife cover is clearly a significant adverse impact on the environment. To reduce this cumulative impact, PGT/PG&E should be required to replant these forests, and the EIS should include an analysis of the expected costs of this work.

AL1-14 Cumulative impacts that may occur as a result of construction are discussed in Chapter 5. Most of the clearing of woody vegetation associated with construction of the PGT Project would either involve: (a) the permanent removal of shrubby vegetation located within PGT's existing right-of-way; or (b) the temporary removal of woody vegetation in the construction right-of-way. We have thoroughly investigated the potential for cumulative impact to occur, and with the exemption of the limited situations identified in FEIS Chapter 5, have determined that these impacts are not significant.

AL1-15 Thank you for your opinion. Please see previous response.

AL1-16 D. **Wetlands**. The DEIS has underestimated the acreage of wetlands that would be affected by the PGT/PG&E project, concluding that the route would cross only 47.2 acres of wetland and riparian habitat. DEIS at Table S-2. The wetlands delineation method used to estimate the amount of wetlands impacted by the PGT/PG&E proposal[9] is acknowledged "to underestimate the amount of jurisdictional wetlands present." DEIS at 3E-2, 4E-5. The DEIS, however, includes no estimate of the significance of those errors. As a result, no meaningful analysis of the project's true impact on wetlands can be made, and the full extent or cost of the required measures to mitigate these impacts is unascertainable. Because the amount of impacted wetlands was underestimated, it is clear that these costs will be significantly greater than was recognized in the DEIS.

AL1-17 E. **Geological**. The DEIS also significantly understates the geological and seismic risks presented by the PGT/PG&E proposal. For example, the DEIS states, in Tables S-2 and 6-1 and the accompanying text, that the entire pipeline will cross only five potential active faults. Not only is this number incorrect (the actual number as stated in the CPUC's FEIR is 20), the DEIS also inadequately discusses the significance of these

AL1-18 seismic risks and fails to point out that 404 miles of the PGT/PG&E pipeline will be in the highest risk area, seismic

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[9] PGT/PG&E's flawed estimate of impacted wetlands was based on an analysis of the FWS National Wetland Inventory ("NWI") maps and some aerial photographs (aerial photographs were not used for the entire route).

AL1-16 We disagree. Prior to publication of the DEIS, PGT provided us with aerial photographs for its entire route. The PGT and Altamont aerial photos were reviewed in an identical manner, and the results of our wetland identification process were included in DEIS, Appendix E, Chapters 3E, 4E and 6, and the Executive Summary. Unfortunately, we did not change the narrative on this subject presented in the DEIS. We apologize for this oversight. The FEIS has been revised, as appropriate.

AL1-17 Our significance criteria defines an active fault in terms of Holocene activity. This criterion results in identification of five potentially active faults.

AL1-18 As shown in DEIS Figure 3A-2, the PGT pipeline would cross no lands in Seismic Risk Zone 3.

zone 3. Similarly, the DEIS fails to adequately discuss the 85 AL1-19 miles of potential volcanic activity near the PGT/PG&E pipeline. These facts must be more clearly expressed so that the public and the Commission understand the significant seismic risks presented by the proposal. Moreover, the discussion of these risks ignores the fact that the PGT/PG&E proposal parallels an existing pipeline through areas of great seismic risk, thereby increasing the potential for service interruption and unreliability and raising significant questions of public safety in the event of a severe earthquake or volcanic event.

In sum, the Commission needs to assess these additional environmental impacts and suggest additional mitigation measures. Adequate mitigation measures have not yet been proposed, and some impacts simply cannot be mitigated.

III. THE DEIS IMPROPERLY RELIES ON THE FEIR WITHOUT RESOLVING DISPUTED ISSUES.

AL1-20 The DEIS relies on the FEIR's findings to support a number of its conclusions. As a general matter, Altamont does not object to the Commission's decision to take this approach.[10]

AL1-19 See responses to Altamont's Appendix B comments.

AL1-20 We disagree. See response to Comment AL1-11 above. In addition, our adoption of the CPUC's EIR which addresses impacts associated with the construction of PG&E's non-jurisdictional facilities is entirely proper under the CEQ's regulations implementing NEPA. We have independently reviewed the impact analysis of the PG&E facilities contained in the CPUC's EIR, and have determined that it adequately discloses potential environmental impacts. Also see response to Comment LAS-1.

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[10] Altamont does, however, question the method by which the Commission has used the FEIR. As a matter of law, the Commission cannot summarily incorporate by reference the CPUC's FEIR. Such incorporation effectively delegates the Commission's authority to prepare the EIS itself and is plainly contrary to the pronouncement of the President's Council on Environmental Quality ("CEQ") allowing federal agencies to incorporate only "material [that] is not of central importance," in drafting an EIS. 43 Fed. Reg. 55978, 55979 (1979). *See also* *State of California v.*

(continued...)

AL1-20 (cont.) However, there are certain areas where the FEIR is defective, and because the Commission is responsible for assessing and mitigating environmental impacts of the entire PGT/PG&E project, it must make the required corrections.[11]

A. ***Wetlands***. The FEIR understates the impact of the PG&E portion of the project on California wetlands. Central to the California wetlands analysis is the assumption that "[h]igh-density vernal pool areas often support about 10 percent cover by vernal pools and swales and 90 percent cover by upland communities." FEIR Tables 2-2, 2-5, 2-6, 3-9, p. 3-51. Yet this assumption is supported by nothing more than a cursory reference

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[10] (...continued)
Bergland, 483 F. Supp. 465, 485 (E.D. Cal. 1980), *aff'd in pt., rev'd in pt.*, 690 F.2d 753 (9th Cir. 1982) (only "supporting technical material or studies [are] permitted to be incorporated by reference into an environmental statement") (citing cases). While certain information properly can be incorporated by reference into an EIS, such information must (1) be summarized, at least briefly, (2) be readily available for public review, and (3) not "[impede] agency and public review of the action." 40 C.F.R. § 1502.21. The DEIS falls far short of this standard by failing to adequately discuss and summarize the impacts of the PG&E portion of the project.

[11] It is well established that a federal licensing agency preparing an EIS for a project "must include in its review the nonjurisdictional facilities that can reasonably be expected to be constructed in conjunction with that project." Although Altamont has disputed the conclusion that the PG&E portion of the Expansion project is "nonjurisdictional," it is nevertheless clear that the Commission must review in detail the environmental impacts of the *entire* PGT/PG&E project. Such a review is required by the CEQ regulations, which the Commission is bound to follow. 40 C.F.R. § 1508.25; 18 C.F.R. § 380.1. In addition, the Commission has adopted this view in a long, consistent line of gas pipeline certification cases. *See*, *e.g.*, *Henry v. FPC*, 513 F.2d 395 (D.C. Cir. 1975); *Atlantic Richfield Co. and Intalco Aluminum Co.*, 49 FERC ¶ 61,294 (1989); *Great Lakes Gas Transmission Co.*, 48 FERC ¶ 61,127 (1989).

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to "file data." Significantly, there has never been any attempt to actually quantify the acres of California vernal pools which would be affected by PG&E's construction. Moreover, it is clear that high-density vernal pool areas can easily support much more than 10 percent vernal pool cover. See "316-Acre Parcel Project, Florin and Excelsior Roads, Sacramento County, Wetland/Riparian/Vernal Pool Survey," Report Prepared for Carlton Homes of California, Sacramento, Ebasco Services, Inc., 1990 (finding support for as much as 33% vernal pool cover). It follows that any attempt to estimate the extent of the acres of vernal pools impacted based on the "10 percent" cover assumption used in the FEIR will significantly underestimate overall wetlands impact in California and associated mitigation costs. The Commission should independently determine the actual amounts of wetlands to be crossed in vernal pool areas and require appropriate mitigation techniques in the EIS.

B. Agricultural, Orchard and Vineyard Resources. The FEIR concludes that 330 acres of orchards and vineyards and 15 acres of prime farmland would be removed in California to construct the PG&E portion of the project. FEIR at 6-192. Notwithstanding this finding, the CPUC summarily concludes that this would represent a less than significant impact because "less than one percent" of the orchards in any county would be removed. DEIS at 4D-2. This "one percent" significance criteria, however, is supported only by purported "professional judgment." Use of such a small percentage is misleading because California has an extraordinarily large amount of these agricultural resources. Thus, a one percent standard does not reflect the actual significance of the project's impacts on these valuable agricultural resources. A more accurate assessment can be made by identifying the actual number of trees or acres of crops impacted by construction. This number would necessarily be large and would reveal the true substantial impact on the productivity of the resources and the livelihood of their owners. As a result, the Commission should reassess the significance of these impacts and require mitigation measures to correct or ease the losses that would occur.

C. **Land Use.** The FEIR also disregards the impact of the PG&E portion of the project on other land uses. For example, 20.8 miles of PG&E's proposed route is outside of existing utility corridors in heavily urbanized Contra Costa County. Despite the fact that this usage is in conflict with existing county plans and policies, the FEIR proposes no reroute or other mitigation measures. Instead, the FEIR merely states that "the applicant should apply for and obtain an amendment to county plans and policies . . . [and that] [i]f an amendment is not obtained, the impact is significant and unavoidable." FEIR at 6-191. The Commission cannot sidestep these land use issues. The final EIS must address these potential impacts and either require a reroute or ensure that the amendment to the county plans has been obtained so that the impact is reduced to a less than significant level.

D. Air Quality. Air quality impacts and necessary mitigation measures are also inadequately addressed in the FEIR. For example, each of the four air basins and 15 counties traversed by the PG&E pipeline in California are already non-attainment for particulate matter less than 10 microns in diameter ("PM_{10}"). As a result, the PG&E portion of the Expansion project would contribute to an already significant air pollution problem. Nevertheless, the FEIR fails to require PG&E to submit a dust control plan for pipeline construction to any Air Pollution Control District ("APCD") outside of the San Joaquin Valley APCD. To correct this deficiency, PGT/PG&E should be required to submit to, and obtain approval of fugitive dust control plans from, each non-attainment APCD prior to construction.

In sum, without these revisions, the Commission would essentially ignore the significant environmental impacts that the PG&E project may create. To correct these deficiencies, the Commission must conduct the independent analysis of the entire PGT/PG&E project that is required by both NEPA and the NGA.[12]

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[12] See, e.g., 55 Fed. Reg. 33027, 33041 (Aug. 13, 1990); Hudson River Sloop Clearwater, Inc. v. Department of Navy, 836 F.2d 760 (2d Cir. 1988); Sierra Club v. United States Army Corp of Engineers, 701 F.2d 1011, 1038-39 (2d Cir. 1983); Sierra Club v. Froehlke, 534 F.2d 1289 (8th Cir. 1976); Henry v. FPC, 513 F.2d 395 (D.C. Cir. 1975); Atlantic Richfield Co. and Intalco Aluminum Co., 49 FERC ¶ 61,294 (1989) ("NEPA requires that the Commission . . . consider the environmental impact of nonjurisdictional facilities which are directly related to a Commission action"); Great Lakes Gas Transmission Co., 48 FERC ¶ 61,127 (1989) (Commission "obligated to consider the impact of the pipeline facilities, including nonjurisdictional facilities); GNC
(continued...)

IV. THE RELEVANT STATUTES AND SOUND PUBLIC POLICY REQUIRE A COMPREHENSIVE COMPARISON OF THE ENVIRONMENTAL IMPACTS OF THE ALTAMONT AND PGT/PG&E PROJECTS.

The CPUC has concluded that PGT/PG&E's project would have a significant adverse impact on the environment even if its 201 mitigation measures were implemented. See decision of the CPUC in Pacific Gas and Electric Co., Dkt. 90-12-119, slip op. at 144 (Dec. 27, 1990). The CPUC further stated that "[t]he PGT/PG&E project would result in the greatest level of significant environmental impacts of any of the alternatives considered in the draft and final EIR," including the Altamont project. Id. at 157; see also FEIR at 2-16.[13]

AL1-21 The DEIS, however, makes no comparison between the Altamont and PGT/PG&E projects. Instead, the DEIS addresses separately the environmental impacts of the two projects. E.g., DEIS at 2-62. The only "alternatives" that the DEIS summarily reviews are other pipeline project proposals, a "no action"

AL1-21 No comparison of the two proposals is required. Both projects are acceptable provided the mitigation measures proposed in the FEIS are implemented. The projects are not competing alternatives to one another.

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[12] (...continued) Transmission Corp., 45 FERC ¶ 61,298 (1988) (since the "nonjurisdictional facilities are directly related and dependent upon the authorization to GNC, the nonjurisdictional facilities should be included as part of the proposed undertaking").

[13] On February 8, 1991, the Attorney General of the State of California filed a petition for rehearing of the CPUC's decision. Recognizing the enormous adverse environmental impact which the PG&E project would have in California and the availability of environmentally superior alternatives to the PG&E project (including the Altamont project), the Attorney General argued that the CPUC had violated state environmental standards. Request for Rehearing at 5-8. This petition for rehearing, together with petitions by Altamont and other parties, is still pending before the CPUC.

AL1-21 (cont.)

alternative, DEIS at S-7 through S-10, 2-64 through 2-74, and certain routing variations for individual segments of the Altamont and PGT/PG&E projects.[14]

The DEIS' approach is unlawful. The "linchpin" of an EIS is the "detailed description of alternatives," which necessarily includes a comparison of the environmental impacts of alternatives. The two projects are clearly alternatives, and as such, their impacts must be compared. Finally, if such a comparison were made, it would be apparent that the Altamont project is environmentally superior.

A. The Altamont and PGT/PG&E Projects Are Alternatives.

NEPA "alternatives" are identified by whether they serve the same general objective or purpose.[15] Indeed, the

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[14] E.g., DEIS at 2-48 through 2-52 (Altamont "South Pass Variations") at 2-22 (PGT/PG&E "Jepson Prairie Reserve"); 4C-13 (PGT/PG&E "Moyie River" alternative alignments); 6-10 (PGT/PG&E "John Day Canyon Variation").

[15] See, e.g., City of New York v. U.S. Dep't of Transportation, 715 F.2d 732, 742 (2d Cir. 1983), cert. denied, 465 U.S. 1055 (1984) (the agency must "consider such alternatives to the proposed action as may partially or completely meet the proposal's goal"); Process Gas Consumers Group v. USDA, 694 F.2d 728, 769 (D.C. Cir. 1981), cert. denied, 461 U.S. 905 ("the range of alternatives need not extend beyond those reasonably related to the purposes of the project"); Piedmont Heights Civic Club, Inc. v. Moreland, 637 F.2d 430, 436 (5th Cir. 1981) (the goal of alternatives section is to ensure consideration of "methods of achieving the desired goal other than the proposed action"); South Louisiana Environmental Council, Inc. v. Sand, 629 F.2d 1005, 1017 (5th Cir. 1980) ("NEPA does require a discussion of all alternatives to a project which would reduce environmental harm while still achieving the goals to be accomplished by the proposed action").

Commission has uniformly considered pipeline proposals as alternatives if they are intended to serve the same basic geographical areas or market.[16]

As recognized in the DEIS itself, *see* "Purpose of the Proposed Projects," DEIS at 1-5, the two projects propose to serve the same market (California) at the same time (fall 1993) with similar quantities of Canadian natural gas. In addition, at the Commission's July 12-13, 1990 technical conference, Paula Rosput, PGT's Senior Vice President, acknowledged that the projects are alternatives:

> there are . . . several competing proposals to bring Canadian gas into California. The most obvious ultimate proposal that's out there right now is the Altamont project.

Statement of Paula Rosput, Tr. at 163-164. As such, the Altamont and PGT/PG&E projects must be viewed as NEPA alternatives.

In failing to compare the Altamont and PGT/PG&E projects as "alternatives" to each other for environmental impact

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[16] See *e.g.*, *Iroquois Gas Transmission System*, 53 FERC ¶ 61,194 at 61,723 n.107 (1990) ("a detailed statement of alternatives is meant to ensure, in part, that the decisionmaker adequately considers other means to achieve the desired objective"); *Delta Pipeline Co.*, 53 FERC ¶ 61,002 (1990) (EIS analyzed as alternatives three proposals to connect Arkoma Basin to interstate pipelines in Arkansas); *Mojave Pipeline Co.*, 42 FERC ¶ 61,351 (1988) (EIS analyzed as alternatives the Kern River, Mojave and Wyoming-California pipelines because they all proposed to provide natural gas to enhanced oil recovery ("EOR") facilities in Southern California); *Great Lakes Gas Transmission Co.*, 36 FERC ¶ 61,270 (1986) (EIS analyzed as alternatives various proposals to transport gas to the northeastern United States); *Boundary Gas, Inc.*, 29 FERC ¶ 61,006 (1984) (EIS analyzed as alternatives various proposals to construct pipelines to transport gas from Canada to the northeastern United States).

ALI-22 analyses purposes, the DEIS does not provide a rationale. There is only a cryptic statement, at page 2-62, to the effect that the two projects may not be "competitive with each other." This statement is factually incorrect. In addition, this observation fails to justify or explain the failure to treat the Altamont and PGT/PG&E projects as NEPA "alternatives."

The DEIS' criteria to select viable NEPA alternatives to the Altamont and PGT/PG&E projects do not require that the projects be "competitive" with either the Altamont or PGT/PG&E proposal. Indeed, nothing in the NGA limits consideration of NEPA alternatives or otherwise conflicts with the Commission's duties under NEPA. Noncompliance with NEPA is permitted only where "a clear and unavoidable conflict in statutory authority exists."[17]

Finally, the fact Altamont is seeking a certificate for its project pursuant to the Commission's optional procedures while PGT is seeking a certificate pursuant to the Commission's traditional procedures is irrelevant from an environmental analysis viewpoint. Indeed, the Commission has often compared, as NEPA alternatives, pipeline proposals that were seeking optional certificates with others that were seeking traditional

ALI-22 See previous response.

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[17] Flint Ridge Development Co. v. Scenic Rivers Ass'n, 426 U.S. 776, 788 (1976) (emphasis added); see also Andrus v. Sierra Club, 442 U.S. 347, 350-51 n.2 (1979) (same); Public Citizen v. NHTSA, 848 F.2d 256, 263 n.27 (D.C. Cir. 1988) (same); Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109 (D.C. Cir. 1971) (alleged conflict with regulatory procedures does not excuse noncompliance with NEPA); 40 C.F.R. § 1500.6.

certificates. For example, in Northeast U.S. Pipeline Projects, 46 FERC ¶ 61,012 (1989), the Commission stated that consideration of pipelines seeking optional certificates

> outside of a comparative hearing will not, indeed cannot, prevent the Commission from considering the superiority of viable alternatives to the proposals under the Natural Gas Act and the National Environmental Policy Act of 1969 (NEPA). . . . [F]ull, complete, and thorough environmental reviews will be conducted on all of the discrete proposals and reasonable alternatives thereto.[18]

B. As Alternatives, the Environmental Impacts of the Altamont and PGT/PG&E Proposals Must Be Analytically Compared.

AL1-23 Because they are alternatives, the EIS must include a comparison of the environmental impacts of the Altamont and PGT/PG&E proposals. Such a comparison is required by CEQ regulations, prior Commission practice, legal precedent and sound public policy.

CEQ regulations, by which the Commission is bound, 18 C.F.R. § 380.1, emphasize that the impacts of alternatives should be presented "in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by

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[18] Id. at 61,070; see also Delta Pipeline Co., 53 FERC ¶ 61,002 (1990) (EIS considered two traditional applications as alternatives to Delta's optional application); Wyoming-California Pipeline Co., 44 FERC ¶ 61,001 (1988) ("the WyCal application [will] be treated generally the same as any other certificate application for purposes of enabling the Commission to comply with applicable environmental law, including NEPA").

AL1-23 We disagree. See response to Comment AL1-21 above.

the decisionmaker and the public." 40 C.F.R. § 1502.14 (emphasis added). CEQ guidance also stress the need for comparison and analysis of alternatives: "most of the 'alternatives' section should be devoted to describing and comparing alternatives." 46 Fed. Reg. at 18028.

Previous Commission pipeline rulings, including cases in which applicants were not entitled to comparative hearings on non-environmental issues, similarly require that alternatives be compared. *See also Iroquois Gas Transmission System*, 53 FERC ¶ 61,194 at 61,723 n.107 (1990) (an EIS "forces agencies to fully evaluate the environmental effects of each alternative proposal as compared to the impacts of the preferred alternative"); *Delta Pipeline Company*, 53 FERC ¶ 61,002 (1990); *Wyoming-California Pipeline*, 45 FERC ¶ 63,005 (1988). Thus, for example, the FEIR/FEIS for the Mojave-Kern River-El Dorado pipeline projects, contained a detailed analysis comparing the environmental consequences of *each* pipeline's preferred route and ranked each project according to its relative impacts.[19] Prior case law also mandates that alternatives be analyzed in a comparative manner. *See North Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1541 (11th Cir. 1990) ("the environmental impacts of the proposal and the alternatives [must] be presented in comparative form"); *Druid Hills Civic Ass'n v. Fed. Highway Admin.*, 772 F.2d 700, 712-13 (11th Cir. 1985) (same); *State of Alaska v. Andrus*,

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[19] *See* Mojave-Kern River-El Dorado Natural Gas Pipeline Projects, Final Environment Impact Report/Statement, Volume III, Comparisons and Recommendations.

580 F.2d 465, 474-75 (D.C. Cir. 1978) (same); Minn. Pub. Interest Res. Grp. v. Butz, 541 F.2d 1292, 1300 (8th Cir. 1976) (EIS gathers "in one place a discussion of the relative impacts of alternatives so that the reasons for the choice of alternatives are clear"); Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 833 (D.C. Cir. 1972) (EIS requires "comparison of the net balance for the proposed project with the environmental risks presented by alternative courses of action").

Finally, sound public policy mandates that the Altamont and PGT/PG&E projects be compared. Over the last several years, the Commission has begun to rely more heavily on market forces to determine which of two or more competing natural gas pipelines should be certificated.[20] The Commission's acknowledged role under this policy is to facilitate market entry and provide a "level playing field" for competitors.

To make the market-based policy work, however, the Commission must use its certificate proceedings to disclose adequate information about competing proposals, including their environmental consequences. Without adequate disclosure of the environmental impacts of a proposal and a comparison of the impacts of competing proposals, the market will not have sufficient information with which to make intelligent decisions that include environmental considerations.

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[20] Altamont does not necessarily concede that such a policy is always appropriate.

Seen in this light, NEPA and other environmental statutes, rather than hindering the implementation of the market policy, actually become an integral part of that policy. NEPA and other environmental statutes ensure disclosure of adequate information about the relative environmental impacts and costs of mitigation measures of competing projects. Indeed, one of NEPA's most important purposes is to disclose to decision-makers, the market, and the public the environmental consequences of competing proposals to aid in the substantive decision of which project to approve. E.g., Trout Unlimited, Inc. v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974).

Such a disclosure, which necessarily includes a comparison of the environmental impacts of competing proposals, allows the public and the Commission the opportunity to consider adequately, along with other market concerns, the environmental impacts of a proposed pipeline. The Commission's market policy, therefore, cannot be implemented properly unless a comparison of the competing Altamont and PGT/PG&E projects is made. Moreover, a failure to compare the environmental impacts of these two projects will result in the elevation of market forces above environmental concerns, a policy that cannot bear careful scrutiny.

C. A Comparison Shows that the Altamont Project is Clearly Environmentally Superior to the PGT/PG&E Project.

AL1-24 A comparison of the two projects makes it clear that the Altamont project, in conjunction with the necessary additions to the Kern River project, would have a much smaller impact on the environment than would the entire PGT/PG&E project. After correcting the questionable data as described previously and in more detail in Appendices A, B and C, it becomes evident that the Altamont project is superior in virtually every category reviewed in the DEIS.[21] Table I, attached hereto, enumerates the potential environmental impacts of both projects and Appendix D, also attached, provides a more complete analysis in narrative form.

CONCLUSION

The Commission should adopt the herein proposed recommendations by Altamont in its final EIS. In particular, a

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[21] A comparison of the two projects is impeded to some degree by the manner in which the DEIS presents the underlying environmental data. The data for the two pipelines are, in several places, incongruent. For example, differences in the applicants' definition of wetlands means that "wetland information for PGT and Altamont are not directly comparable." DEIS at 3E-2. Similarly, the impact of the Altamont project on visual resources is overstated, DEIS at 6-28, while the landslide potential for the PGT/PG&E project is underestimated and differs substantially from the presentation of Altamont's data. The failure to fully analyze or describe the environmental impacts of the PG&E portion of the PGT/PG&E project in California also makes it difficult to conduct a full and complete comparison between the Altamont and PGT/PG&E proposals.

AL1-24 Thank you for your opinion. See previous response.

AL-34

comparison of the proposed projects should be provided. With these modifications and additions, it will become even more obvious that the Altamont project is environmentally superior to the PG&T/PG&E project. Given the extreme disparity in the environmental consequences of the two projects, PGT's certificate application should be denied.

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TABLE I SUMMARY COMPARISON OF ENVIRONMENTAL IMPACT ASSOCIATED WITH THE CONSTRUCTION OF THE PGT/PG&E EXPANSION PROJECT AND THE ALTAMONT PROJECT[a]

Resource Area/Impact	PGT/PG&E Facilities	Altamont & Kern River Expansion Facilities[a]
GEOLOGY		
Potential active faults crossed	20[b]	0[c]
Miles in Seismic Risk Zone Three	404[b]	0
Miles of active volcanic areas	85[b]	0
Miles of liquefaction potential	50.6	7.8[d]
Miles of landslide potential	21.5[b]	3.2
SOILS		
Miles or prime farmland crossed	291.7	8[e]
Miles of soil disturbed with poor or poor-to fair rehabilitation potential	312.8	252[f]
WATER QUALITY		
Number of perennial stream crossings	70	61
Number of intermittent stream crossings[g]	205	127
Number of major river crossings	17	9
Number of waterbody crossings with contaminated sediments[h]	3	2
LAND USE		
Number of residential structures located within 50 feet of construction right-of-way	124	0
Total acres of land temporarily disturbed	13,757.5	7,565
Acres of cropland temporarily disturbed	4,212.6	2,495
Miles of federal land crossed	141.8	206[i]

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[a] This table was compiled by aggregating impacts of PGT facilities with those of PG&E facilities on Table S-2/6-1 and by aggregating impacts of Altamont facilities with those of Kern River expansion facilities on Table S-3/6-2. No attempt has been made to change the information unless otherwise footnoted.

Table I
(continued)

Resource Area/Impact	PGT/PG&E Facilities	Altamont & Kern River Expansion Facilities[a]
Miles of state/local land crossed	10.8	60
Number of land use policy/regulatory conflicts	1[i]	0[j]
VEGETATION AND WILDLIFE		
Acres of wetland/riparian habitat crossed	47.2[k]	255
Acres of forest temporarily disturbed	2631	30.8
Number of federally listed or proposed threatened or endangered plant species potentially affected	8	0
Number of federally listed or proposed threatened or endangered wildlife species potentially affected	14	9
Acres of big game habitat significantly affected[l]	150	10[m]
Acres of upland game bird habitat significantly affected	94.5	10[m]
Acres of waterfowl habitat significantly affected	67	0
FISHERIES		
Number of federally listed or proposed threatened or endangered fish species potentially affected	7	1
Number of anadromous fisheries crossed	18	0
Number of important spawning streams crossed	23	8
Number of important recreational fisheries crossed	24	14
SOCIOECONOMICS	NQ[n]	NSI[o]
AIR QUALITY		
Number of new compressor stations	1	11
Number of compressor station additions	4	2

Table I
(continued)

Resource Area/Impact	PGT/PG&E Facilities	Altamont & Kern River Expansion Facilities[a]
Number of compressor stations requiring PSD review	3	7
NOISE QUALITY		
Number of compressor stations exceeding 55 dBA	1	0
TRANSPORTATION	NSI	NSI
PUBLIC SAFETY	NQ	NSI
CULTURAL RESOURCES		
Number of known sites within APE	220	193
Miles of significant paleontologic formations crossed	540	241[P]
VISUAL RESOURCES		
Miles of high or moderete visual impact	242.33[b]	97.2

Table I
(continued)

Resource Area/Impact	PGT/PG&E Facilities	Altamont & Kern River Expansion Facilities[a]

Footnotes

[a] Kern River expansion facilities include construction of five new compressor stations and installation of additional compression at two other stations. Because all expansion facilities would be located at discrete sites, some parameters are not relevant and are therefore marked "NR".

[b] Includes FEIR data.

[c] While the two fault systems that the Altamont route would cross are believed to be inactive.

[d] Liquefiable sediments are found at the preliminary location of Kern River Compressor Station No. 3 in the Utah County, Utah.

[e] Potentially prime farmland in Montana (requires irrigation to be designated as "prime").

[f] Poor to poor-to-fair rehabilitation potential soils may be encountered at five of the preliminary Kern River compressor station sites.

[g] Includes ephemeral streams and canals. Only major intermittent streams are included.

[h] Only includes waterbodies with known contaminated sediments.

[i] The preliminary location of Kern River Compressor Station Nos. 6 and 8 is on land administered by the BLM. Assumes the number "1814.9" in the "Kern River Expansion Facilities" comments should read "0".

[j] As indicated elsewhere in the DEIS (e.g. p. 6-37), on November 28, 1990, Altamont filed modifications to its proposed route which removed the one conflict listed on Tables S-3 and 6-2. The PG&E project would encounter a land use conflict in Contra Costa County.

[k] Estimate for PGT/PG&E does not include 9.3 acres of riparian habitat and 326 acres of vernal pool habitat. Estimate for Altamont includes deflation basins. As the DEIS notes, the estimates are overstated for Altamont and understated for PGT/PG&E for other reasons as well.

[l] Does not include significant beneficial impacts, or any significant impact on migration corridors.

[m] Kern River's Compressor Station No. 2 in Morgan County, Utah, may impact certain bird and big game habitat. Twenty acres of impact are assumed.

[n] NQ=Not quantifiable.

[o] NSI=No significant impact.

[p] Potentially significant paleontological resources may be encountered at the preliminary location of Kern River Compressor Stations Nos. 3 and 6.

Appendix A - Comments Regarding the Altamont Project and Both Projects Generally

	Page/Para/Line	Comment or Question
AL2-1	S-18;5;8-10	The DEIS states that "...adequate revegetation on portions of Altamont's proposed right-of-way may take years." The word "several" should be added in front of the word "years" in the sentence on page S-18 to be consistent with the wording on page S-15.
AL2-2	S-18; 3; 1 S-19; Table S-3; 1-3	The DEIS states: "Geology-related impacts posing the greatest potential hazard to Altamont's pipeline include potentially active faults, areas with high liquefaction potential, and areas of landslide potential. Table S-3 presents this summary in tabular form." This statement can be read to mean that the Commission believes that Altamont's project may present significant geological impacts. However, final route alignment, based on geotechnical investigations, will lead to less-than-significant impacts associated with faults, liquefiable substrates, and landslides along Altamont's route. Indeed, on page 4A-7, para. 2, line 6, the DEIS concludes that because strong ground shaking is not likely, "the probability of liquefaction-related damage to the pipeline is therefore considered less than significant." As a result, the language on pages S-18 concerning these geological risks should be appropriately modified with respect to Altamont, and Table S-3 changed to indicate that no miles of liquefaction or landslide potential will be impacted by the Altamont pipeline.
AL2-3	S-19;Table S-3	The statement in the DEIS about "(a)cres of cropland temporarily disturbed," is obviously NOT 1814.9 as shown for Kern River. This number applies instead to PG&E's facilities. For Kern River, less than 30 acres would be disturbed.
AL2-4	S-22; 5; All	Line 3 contradicts lines 5 and 6, with respect to disturbance of federally-listed or proposed threatened or endangered plant species or their habitat. Line 3 says such species or habitat would be affected and lines 5 and 6 say they would not. The conclusion on lines 5 and 6 is correct, and line 3 should be modified accordingly, for the following reasons. Table S-3 (page S-20) indicates that no acres of big game, upland game bird or waterfowl habitat would be affected by Altamont facilities. Furthermore, Tables 4E-12 (page 4E-57) and 4E-14 (page 4E-63) also show these impacts

AL2-1	We disagree. Use of the word "several" may be construed to mean less than five. Based on our analysis and consultations with soil conservation authorities and land managers in the area, we continue to feel that portions of Altamont's proposed route may take longer to revegetate.
AL2-2	The Commission staff believes that geologic factors pose a potential hazard to the Altamont pipeline. We agree that final route alignment and appropriate engineering designs, as needed, would reduce potential hazards to less-than-significant levels. However, alignment has not yet been finalized and designs not yet completed. Further, our belief that ground shaking would not be strong enough to liquefy the sediments in Fremont and Sweetwater County does not mean that these sediments are not potentially liquefiable.
AL2-3	Comment accepted. See changes to Table S-3 and 6-2.
AL2-4	Comment noted. See changes to the Executive Summary and Chapter 6, as well as detailed responses to comments raised in Appendix B of this comment letter.

	Page/Para/Line	Comment or Question		
AL2-4 (cont.)		to be less than significant. Therefore, the existing reference at page S-22 of the DEIS to significant impacts on these species by Altamont should be deleted.		
AL2-5	S-24; 5; All S-21; Table S-3; 5	See comment on page 3L-5, para 3, lines 5-6.	AL2-5	See response to Comment AL2-42 below.
AL2-6	S-26; Table S-4; 15	The number "1" under the "Proposed Route" should be changed to "0" to reflect the minor route realignment made by Altamont on November 28, 1990.	AL2-6	Comment accepted. See change to Tables S-3, S-4, 6-2, and 6-3, as well as other locations where the DEIS discussed the original route crossing of the NHL.
AL2-7	1-1; 1;2	Insert the word "competing" between the words "two" and "proposals".	AL2-7	The staff's position is that the two projects are not competitive. See response to Comment AL1-21.
AL2-8	1-4; Fig. 1-2	Compressor Station #6 (Farson) is shown to be located in Sublette County, when it is actually located in Sweetwater County just south and west of the Sublette/Sweetwater County line. In addition, WyCal Pipeline should be deleted and Kern River Pipeline should remain, with "proposed" removed.	AL2-8	Comment partially accepted. WyCal still holds two optional certificates.
AL2-9	1-16;1;4	Add sentence following "1989". Public meetings were also held jointly by the BLM and State of Wyoming in Worland, Cheyenne and Kemmerer on October 19 and 20, 1989.	AL2-9	Comment accepted. See change to Chapter 1.
AL2-10	2-42; 7	By letter dated December 3, 1990, WyCal requested that BLM suspend all activities on its application and has indicated in various forums that it will not proceed with its proposed pipeline. Thus, the EIS should be modified to indicate that WyCal is not a viable alternative to the other proposed projects.	AL2-10	Comment partially accepted. See response to Comment AL2-8 above and changes to Chapter 2.
AL2-11	2-44;3;4	"44,333 HP" should read "47,800 HP," as per Altamont's certificate application and Table 2-9 (p. 2-45).	AL2-11	Comment accepted. See change to Chapter 2.
AL2-12	2-44; 3; 7	The DEIS describes "a microwave communication system" as a required facility. However, Altamont has not yet determined whether the communication system will be a microwave system or a satellite system. The EIS should be modified to recognize this option.	AL2-12	Comment accepted. See change to Chapter 2.
AL2-13	2-44; 3; 10	It is stated that Altamont plans to maintain a central field office in Billings, Montana. However, Altamont has not finally selected the locations of field offices and may not need a central field office. This information should be reflected in the EIS.	AL2-13	Comment accepted. See changes to Chapters 2 and 4G.
AL2-14	2-44;5;2	The phrase "...international border town of Wild Horse,	AL2-14	Comment accepted. See change to Chapter 2.

	Page/Para/Line	Comment or Question		
AL2-14 (cont.)		Montana" should be changed to read "Port of Wild Horse, Montana".		
AL2-15	2-45;Table 2-9	After Sweetwater add "Lincoln" County plus "25" miles.	AL2-15	Comment accepted. See change to Chapter 2.
AL2-16	2-47;2;5	The Yellowstone River crossing is near MP 257, not MP 157.	AL2-16	Comment accepted. See change to Chapter 2.
AL2-17	2-47;4;5	The proposed Altamont route does not cross the Sand Draw Oil and Gas Field. The intended reference may be to the Muskrat Creek or Alkali Butte Oilfield.	AL2-17	Comment accepted. See change to Chapter 2.
AL2-18	2-47;4;8	The DEIS states that "[t]he Continental Divide would be crossed about a mile southeast of South Pass near MP 529, as would a small portion of the South Pass National Historic Landmark (NHL) near MP 531." However, as the footnote properly notes, this crossing of the NHL has been eliminated. The statements in footnote 1 should be moved to the main body of the report in the FEIS.	AL2-18	Comment accepted. See change to Chapter 2.
AL2-19	2-51;4;6	The proper reference may be to the Sand Draw Oil Field rather than Sand Hills.	AL2-19	Comment accepted. See change to Chapter 2.
AL2-20	2-52; 3; 10	See comment on 2-44, para. 3, line 7. Thus, reference to additional right-of-way is premature. If a satellite communication system is used, no additional right-of-way would be needed. The text should be revised accordingly.	AL2-20	Comment accepted. See change to Chapter 2.
AL2-21	2-61; 2; 3	The text describes a control center proposed at Billings along with possible district office locations at Lewistown, Billings and Riverton. As previously noted, Altamont has not finally selected the location for its control center or its field offices. Indeed, the control center may be located in Tenneco Gas' master control center outside of Houston. The text should be revised accordingly.	AL2-21	Comment accepted. See change to Chapter 2.
AL2-22	2-61; 4; 1	The text states that herbicides would not be used within fenced areas at compressor and metering stations. However, in some instances use of herbicides may be the preferable method of weed control. The EIS should be revised to allow the use of herbicides within these fenced areas in accordance with appropriate legal requirements.	AL2-22	Comment accepted. See change to Chapter 2.
AL2-23	2-63; Table 2-13	Altamont wishes to revise certain of the data shown in Table 2-13 (p. 2-63) and Table 4H-1 (p. 4H-3), based upon more recent information concerning the Additional	AL2-23	Comment accepted. See change to Chapter 2 and 4H.

	Page/Para/Line	Comment or Question		
AL2-23 (cont.)		Compression Facilities on the Kern River System. Specifically, the horsepower (hp) for the stations shown on Table 2-13 in Clark County (Nevada) at Milepost 9 should be revised to 20,000 and in San Bernardino County (California) at Milepost 28 should be revised to 10,000. Also on Table 4H-1 (p. 4H-3) the "Proposed hp column at Kern River Compressor stations No. 6 and No. 8 should be revised to 20,000 and 10,000, respectively. The "No Emissions" column should be revised accordingly to 254 and 127 tons/year for stations No. 6 and 8, respectively. Moreover, Kern River may substitute an electric drive compressor unit at the San Bernardino County (California mp. 28) station, instead of a gas turbine driven unit, due to the close proximity of an electric power generation station. Specific site-rated horsepower information for all of the Kern River system compressor additions will be supplied by Kern River at such time as Kern River files an application to construct its incremental facilities.		
AL2-24	3A-22;2;1,6	The phrase "...the Cedar Ridge Fault...." should be replaced with: "....the Cedar Ridge/Dry Fork fault system....". The same replacement should be made in line 6.	AL2-24	Comment accepted. See change to Chapter 3A.
AL2-25	3A-24;1;1,6	The phrase "...the Cedar Ridge Fault..." should be replaced with "...the Cedar Ridge/Dry Fork fault system...". The same replacement should be made in line 6.	AL2-25	Comment accepted. See change to Chapter 3A.
AL2-26	3C-9; 3; 1	The DEIS states that "[a] total of 93 streams, including 35 perennial rivers and streams, 40 intermittent streams, and 18 ephemeral streams, would be crossed in Montana." However, these designations were based on named drainages as shown on USGS topographic maps. The actual number of perennial and intermittent drainages crossed by the Altamont pipeline will be considerably smaller, while the number of ephemeral drainages will be somewhat greater. This is because USGS mapping criteria, particularly on older maps, do not accurately depict whether a stream is perennial or ephemeral. Many of the drainages that were mapped by USGS as intermittent are, in fact, ephemeral. Similarly, some streams that were mapped as perennial may actually be intermittent or ephemeral. Final route design, prepared in the year prior to construction, will appropriately address each drainage	AL2-26	Comment noted. See change to Chapter 3C. You are correct that named drainages shown on USGS topographic maps were used to compile baseline data. While we do not necessarily disagree with your assessment that the number of intermittent and perennial streams may be smaller and the number of ephemeral drainages greater than that represented in the DEIS, we have not changed these numbers for the FEIS. As a practical matter, implementation of our Stream and Wetland Construction and Mitigation Procedures would reduce impact associated with stream crossings to less than significant levels.

	Page/Para/Line	Comment or Question
AL2-26 (cont.)		and characterize more accurately the nature of the flows. Minor realignments of the proposed route will further decrease the number of perennial stream crossings, because these alignments will be deliberately placed to avoid as many crossings as possible. The EIS should be revised to reflect each of these refinements, so that the reader understands that the number of both perennial and intermittent drainages crossed will be much smaller.
AL2-27	3C-10; Figure 3C-2	See comment on p. 1-4, Figure 1-2.
AL2-28	3C-11; 2; 3	The DEIS states that "[a]ccording to the Montana Department of Highways (MDH), at least 15 feet of scour is possible." This estimate is not applicable for the following reasons. First, this statement is based upon scour depth calculated at the Winifred bridge, at least 30 miles downstream from the proposed Altamont crossing. This an unreasonably great distance to use as a basis for extrapolating for scour depth at the location of Altamont's crossing. The maximum depth of scour and appropriate depth of cover will be determined for the actual crossing from field core samples which will be taken during the 1991 season. This information will be generated for appropriate permit applications and will be forwarded to the Commission staff at that time. Second, this estimate relates to "local scour" which is caused by a local obstruction, such as bridge piers, abutments and other objects that perpetually obstruct the flow in different ways. However, an installed gas pipeline does not pose a risk of "local" scour. After construction, excavated bed materials will be placed in the trench and the bed returned to its approximate original configuration. No piles of excavated materials which may direct flows during extreme runoff events will be left in the channel or on the overbank areas. In contrast, the only risk of scour posed by Altamont's pipeline is known as "general scour." General scour is provided by the imbalance in sediment transport and may include construction at a bridge opening or encroachment by valley walls, general aggravation and degradation of the streambed and scour induced by the curvature effect. General scour in a particular stream varies with location and is dependent upon channel shape, nature of the banks and overbank areas and channel slope, as well as bed material size and armoring. (Leopold, Wolman & Miller, "Fluvial Processes in Geomorphology" (1964)).

AL2-27 See response to Comment AL2-8 above.

AL2-28 Comment noted. See change to Chapter 4C. This information was included at the specific request of the State of Montana, a cooperating agency in the preparation of this EIS. We have recommended that the proposed crossing of the Missouri River be conducted using the directional drilling technique. If this technique is employed, the scour depth issue is irrelevant. If appropriate mitigation measures are developed which would allow Altamont to construct this crossing using a traditional wet trench approach, then this issue would be resolved prior to issuance of Montana's floodplain development permit and easement grant for crossing state waters.

Page/Para/Line — Comment or Question

AL2-28 (cont.)

Therefore, the maximum depth of scour at the proposed pipeline crossing should be substantially less than 15 feet. Consequently, this portion of the EIS should thus be revised to make it clear that this actual depth of scour at the pipeline will not necessarily be 15 feet and will be determined and resolved as described above.

AL2-29 3C-12; 1; All

Altamont disagrees with the assertion in the DEIS that the Yellowstone River channel at the proposed crossing is highly unstable and erosive. The Laurel crossing of the Yellowstone River referred to in the DEIS is approximately 7-10 miles downstream from Altamont's proposed crossing. Instability at that distant location does not mean that the area at which Altamont proposes to cross the Yellowstone is similarly unstable.

In its preliminary investigation of the Yellowstone, Altamont found no evidence of significant channel instability at the crossing, other than minor shifting of gravel bars within the channel, and very slow lateral bank erosion into Cretaceous shale cliffs along the south bank. Low, stabilized sand dunes several yards north of the north bank suggest that the channel has not migrated to that point during the Holocene (assuming the dunes are Late Pleistocene in age). Shale bedrock is probably very shallow, 10 to 20 feet below the channel bed. No evidence has been found to indicate that the trenching across the cobble/gravel bed of the river and any shallow shale bedrock below would lead to channel instability. Moreover, any such construction-induced instability would be site-specific, and not necessarily related to reported instability at the Laurel pipeline crossing.

In addition, the bed and bank materials are not highly erosive, and there would not be a major influx of sediment into the river during construction. While the MDH considers the full 13 feet of alluvium at the Laurel and Columbus bridges to be within the "scour zone," this value of scour refers to local scour as is caused by a local obstruction. As we explained above (Chapter 3C, page 11, para. 2, line 3), general scour is dependent upon site specific channel characteristics and may be considerably less than local scour. In fact, field studies done by Dan Nebel, Engineering Geologist, HKM Associates (Billings, Montana), demonstrate that the bed of the Yellowstone River is

AL2-29 Comment noted. See change to Chapter 4C. This information was included at the specific request of the State of Montana. Its validity would be determined during Montana's permitting process.

	Page/Para/Line	Comment or Question	
AL2-29 (cont.)		well armored in this reach with median bed material size in the range of four to six inches or larger. Therefore, the maximum depth of scour at the proposed crossing probably will be less than 13 feet. Nevertheless, the hydraulic and geomorphic characteristics of the actual crossing site will be determined, and the potential for scour analyzed, during the permitting phase and submitted to the Commission at that time. In addition, the depth of alluvial material will be estimated based upon available nearby well logs and visual observation of bedrock in the channel, banks and overbank areas. Depending upon the results of these evaluations, the actual crossing construction method and potential impacts will be determined. Potential alternative crossing methods will also be evaluated. Thus, this paragraph of the DEIS should be revised to eliminate the declaration that the Yellowstone River Channel is unstable or erosive at the crossing point and to indicate that scour depth risks will be determined and resolved at the permitting stage, as described above.	
AL2-30	3C-13; 2; 1	See comment on 3C-9, para 3, line 1.	AL2-30 See response to Comment AL2-26 above.
AL2-31	3D-13;6;3	See comment on page 2-47, para. 4, line 5.	AL2-31 Comment accepted. See change to Chapter 3D.
AL2-32	3D-14; 3; 3	The DEIS states that "[n]orth of Farson, the route would cross the Oregon-Mormon Trail near MP 560.5." To avoid any implication that this crossing would affect visual resources, Altamont suggests adding: "At this crossing, the historic trail has been obscured by a privately-owned hay field, so the Trail is no longer distinguishable."	AL2-32 Comment noted. See change to Chapter 3D.
AL2-33	3E-33;Table 3E-6	The correct source of this table is: County Weed Boards, Montana and County/Weed and Pest Control Districts, Wyoming.	AL2-33 Comment accepted. See change to Chapter 3E.
AL2-34	3E-36;3;2	The statement about availability of aerial photos is not accurate. Aerial photos (1:12,000) were made available to FERC staff for all route variations.	AL2-34 Comment accepted. See change to Chapter 3E.
AL2-35	3F-6;6;1	The DEIS identifies six crossings of Ross Fork Creek. As is indicated in a footnote in subsequent text sections (e.g. p. 6-38, #54), Altamont filed route realignments on November 28, 1990, reducing the number of crossings to two.	AL2-35 Comment accepted. See change to Chapter 3E.
AL2-36	3F-8;Table 3F-4	In Montana section, Sturgeon chub, "*Gila* spp." should	AL2-36 Comment accepted. See change to Chapter 3E.

	Page/Para/Line	Comment or Question		
AL2-36 (cont.)		be "Hybopsis gelida."		
AL2-37	3F-10;9;1	It should be noted that the Beaver Creek route realignment filed by Altamont on November 28, 1990 avoids a Stambaugh Creek crossing.	AL2-37	We disagree. Stambaugh Creek would now be crossed near MP 505.3. However, the November 1990 realignment would avoid Tweed Creek.
AL2-38	3G-7;Table 3G-5	The Number of campsites (35) for the Martinsdale, MT, has not been included in the county total.	AL2-38	Comment accepted. See change to Table 3G-5.
AL2-39	3N-4;1;3	"Stillwater" should read "Sweetwater".	AL2-39	Comment accepted. See change to Chapter 3H.
AL2-40	3N-5;1;2 3I-4; 3; 3I-5;1;2 3I-5; 3;2	See comment on page 2-63, Table 2-13.	AL2-40	See response to Comment AL2-23 above. See also changes to Chapter 3I.
AL2-41	3K-3;1;2	The EIS should be modified to state that maximum distance allowed between sectionalizing block valves for Class 1 locations is 20 miles.	AL2-41	Comment accepted. See change to Chapter 3K.
AL2-42	3L-5; 3; 5-6	The DEIS states that "locations where the [PGT/PG&E] pipeline would be adjacent to existing rights-of-way were not characterized as visually sensitive because the visual impact on these sites is primarily incremental." Given this assertion, Table 3L-2 should be modified because the existing table fails to consistently present Altamont's potential visual impacts. Portions of Altamont's proposed route between MP 532-55 in the South Pass area follow an existing telephone cable right-of-way and, hence, visual impacts in the area should also be considered incremental. Similarly, the proposed route relocation to the north side of SR 28 in the South Pass area is adjacent to the highway right-of-way and visual impacts there should also be considered incremental. These modifications should be noted in Table 3L-2.	AL2-42	Comment noted. See change to Chapter 3L. Table 3L-2 does not list the expected impacts that the project would have on any location. It is a table of visually sensitive areas. See also revised Chapter 4L and Table 4L-3.
AL2-43	3L-8;Table 3L-2	Mileposts 264.6, 266.9 and 561.5 coincide with private lands which should not be included in this table, according to the statement on page 3L-5, para. 3, line 4.	AL2-43	Comment accepted. See changes to Tables 3L-2 and 4L-3, and Chapter 4L.
AL2-44	3M-12; Table 3M-2	The Table should be reformatted to distinguish between prehistoric and historic cultural resources in order to coincide with the corresponding narrative textual descriptions.	AL2-44	Comment accepted. See change to Table 3M-2.
AL2-45	3M-13; 2; 7	The DEIS states that "[m]any of the roads and trails built during this time, as well as the mining communities of South Pass City, Atlantic City, Miners	AL2-45	Comment accepted. See change to Chapter 3M.

	Page/Para/Line	Comment or Question	
AL2-45 (cont.)		Delight and Fort Stambaugh (all listed in the NRHP), are within the project area." The term "within the project area" is vague and creates an impression that the pipeline route will impact these communities, and "many of the roads and trails built during this time". However, many of these sites may already be ineligible for inclusion on the NRHP, due to prior disturbances and a resulting loss of integrity as an historic resource. All discussions of resources in the EIS known to be situated outside the APE and study corridor should be revised to clarify that they are beyond the APE, and to make it explicit that no impact to these resources is expected.	
AL2-46	3M-13;6;2,3	The statement "[n]o tribal lands would be crossed..." should be reworded to "[n]o reservation land would be crossed...," in recognition that the route crosses the aboriginal territories of many tribal groups.	AL2-46 Comment accepted. See change to Chapter 3M.
AL2-47	3M-16;4;1	See comment on p. 3M-13, para. 6, line 2,3.	AL2-47 See response to previous comment.
AL2-48	4A-7; 4, 5; All	Altamont suggests that a new paragraph be inserted after existing paragraph 4 as follows: "Altamont plans to identify mineral resource owners with interests in lands crossed by the proposed pipeline route, negotiate acceptable terms and conditions for crossing these claims, make minor routing adjustments as required, or acquire the necessary right-of-way." This will make it clear that Altamont will resolve any of the DEIS' suggested conflicts with potential future mineral development activities in the vicinity of its pipeline.	AL2-48 Comment accepted. See change to Chapter 4A.
AL2-49	4B-5; 1; 5	The DEIS would require Altamont to use a paraplow or similar "winged" deep plow to loosen compacted soil. Because the ground over portions of the Altamont route is too rocky to use such a plow, Altamont may need to use a ripper attachment on a bulldozer or grader to alleviate compaction, because this instrument is more effective in such soils. Therefore, the EIS should be changed to allow for the use of ripper attachments in rocky areas.	AL2-49 Comment noted. DEIS Recommendation 4 allows for project applicants to request site-specific exemptions from our Erosion Control, Revegetation, and Maintenance Plan and our Stream and Wetland Construction and Mitigation Procedures.
AL2-50	4B-5; 3; 4	Concerning topsoil stripping, the DEIS states that "Altamont ...would salvage between 4 and 12 inches of topsoil or available surficial material along the entire length of its proposed route." Altamont recommends adding: "In the semi-arid and arid soils of the Altamont route, salvaging more than 12 inches would reduce the amount of organic matter available for vegetation reestablishment." This will make it clear	AL2-50 Thank you for your comment. We do not normally require more than 12 inches of topsoil stripping.

	Page/Para/Line	Comment or Question		
AL2-50 (cont.)		why Altamont does not plan to salvage to greater depths.		
AL2-51	4B-5; 4; All	The DEIS reference to the 75 foot right-of-way width for the "ditch, plus spoilside method" is wrong. As indicated at page 2-52 (section 2.4.4), Altamont's standard right-of-way will be 100 feet. The EIS should be corrected accordingly.	AL2-51	Comment noted. See changes to Chapter 4B and Appendix B-1.
AL2-52	4B-5; 5; All	Altamont believes that, depending on site-specific conditions, segregating topsoil from the entire construction right-of-way in rangeland areas, as specified in the DEIS, may result in increased wind erosion during segregation efforts, obliteration of surface vegetation, destruction of the important root mat of existing vegetation, an increased potential for water erosion, and reduced soil moisture (i.e., a "drying" of the soil). Wishart, D and Hayes, J., "Effectiveness of Soil Conservation Procedures Employed on Recent Major Pipeline Construction in Western Canada" (September 22, 1988). Therefore, the EIS should be revised to allow Altamont to perform less than full right-of-way stripping if warranted by site-specific conditions.	AL2-52	Comment noted. See change in Chapter 4B and Appendix B-1. However, the BLM intends to require full right-of-way topsoil stripping on rangelands which it administers.
AL2-53	4B-6; 1; 3	The DEIS indicates that the Commission changed seed mixes/soil amendments from those proposed by the applicants, based on recommendations of regional SCS offices, to those specified in Appendices B-2 and B-3. Altamont disagrees with a number of these recommendations, for the detailed reasons set forth below in our comments on those Appendices. In short, many of the species recommended for the Altamont route are not appropriate, given the climate and soils along the pipeline. Second, some of the species deleted from Altamont's proposed seed mix are indeed appropriate and consistent with the environment along the proposed route. Altamont would welcome an opportunity to meet with the Commission to further discuss these issues, so that fully appropriate seed mix/amendment criteria can be agreed upon and specified in the EIS.	AL2-53	Thank you for your comment. Alteration of the seeding requirements were also based on discussions with the BLM and the Montana Department of Natural Resources and Conservation. A number of the concerns raised by this comment are reflected in the revisions to Appendix B-3.
AL2-54	4B-6; 4; 9	The DEIS states that "[i]n terms of plant establishment, spring seeding is risky in Hill, Choteau, Fergus and Judith Basin Counties in Montana because of the unseasonal winds (chinooks) causing dramatic temperature changes. We therefore recommend fall seeding only in Hill, Choteau, Fergus and Judith Basin Counties." Altamont believes that, if properly conditioned to ensure proper planning, Altamont should	AL2-54	Comment noted. The time of seeding is based on BLM soil scientist recommendations. If climatic conditions after construction are favorable for seeding, deviations may be granted as allowed by DEIS Recommendation 4.

	Page/Para/Line	Comment or Question
AL2-54 (cont.)		be allowed the flexibility to seed in any appropriate season. The Commission's basis for prohibiting spring seeding -- that chinooks may cause substantial temperature change -- does not support such a broad restriction. Altamont should be allowed to conduct spring seeding at any time after chinook season (which usually extends from December through mid-April). Altamont prefers to retain the flexibility to plant seed in any appropriate season depending on then-existing conditions, and the EIS should be changed to allow Altamont to make this necessary site and time-specific determination of when to seed.
AL2-55	4B-7; 2; 4	The DEIS indicates that the Commission adjusted the seeding rates in Altamont's proposed mixes. Altamont disagrees with some of these adjustments. Please refer to our specific comments on Appendix B below. Altamont would also welcome an opportunity to meet with the Commission staff to discuss the appropriate seeding rates. The EIS should be revised accordingly.
AL2-56	4C-3; 2; 4 4C-5; Table 4C-1	The DEIS provides a list of stream crossings along the Altamont Project route that could be sensitive to streambank erosion and channel scour at Table 4C-1. Altamont submits that two river crossings should not be included in this Table. Altamont's reconnaissance overflights and its examination of aerial photos of the Milk River show no evidence that construction of the pipeline would lead to any significantly increased channel or bed instability, or to materially increased bed-material or suspended sediment load. The proposed crossing is eight miles upstream of Fresno Reservoir, which is silting in rapidly and has lost much of its water-storage capacity. A large, low delta has formed, and channel bed aggravation related to the delta deposition extends at least three miles up the channel, and perhaps as far as the proposed crossing. Upstream of the Altamont crossing, along the Milk River in Canada, are extensive areas of eroding Cretaceous shale beds, as well as silty glacial lake deposits of Pleistocene age. The river water is turbid even during some low-flow periods. Any channel instability at or near the proposed crossing is clearly related to the high natural sediment load of the river, to possible bed aggravation caused by the reservoir, and to natural migration of the channel on the narrow floodplain. At the Altamont crossing, the Milk River channel is nearly

AL2-55 Thank you for your comment. See response to Comments AL2-49 and -53 above, as well as response to State of Montana Comment 73.

AL2-56 Comment partially accepted. Based on further analysis and information provided since issuance of the DEIS, we agree that the Milk River should not be listed in Table 4C-1. See changes to Chapters 4C and 6. See also response to Comment ALT2-29.

	Page/Para/Line	Comment or Question		
AL2-56 (cont.)		straight and is relatively stable laterally, in comparison to meandered reaches several miles above and below the crossing. In short, the Milk River occurs in a depositional, rather than an erosional, environment. Similarly, Altamont's geotechnical and geomorphic studies of the Yellowstone River crossing found no evidence of significant channel instability at the crossing, other than minor shifting of gravel bars within the channel, and very slow lateral bank erosion into Cretaceous shale cliffs along the south bank. Low, stabilized sand dunes a few tens of yards north of the north bank suggest that the channel has not migrated to that point during the Holocene (assuming that the dunes are late Pleistocene in age). Moreover, based on these geotechnical and geomorphic studies, it appears that shale bedrock is probably very shallow, 10 to 20 feet below the channel bed. Both these river crossings, therefore, should be eliminated from Table 4C-1.		
AL2-57	4C-3; 2; 8 4C-5; Table 4C-1	As discussed previously (p. 3C-11, para. 2 and line 3; p. 3C-12, para. 1, all), Altamont proposes to conduct site-specific scour depth studies to determine appropriate depths of cover at the Missouri and Yellowstone Rivers. Because these studies will supply site-specific information, these should be used to determine appropriate depths for pipeline burial. These studies will be completed by Altamont as soon as results of geotechnical boring programs become available.	AL2-57	Thank you for your comment.
AL2-58	4C-3; 4; 2	The DEIS states that Altamont should submit a Spill Prevention Containment and Control Plan (SPCCP) for inclusion in the Final EIS. However, Altamont notes on p. 6-30 (#7) that no time period is specified for submission of the plan. Presumably the SPCCP is only required prior to construction and not prior to the EIS. The Clean Water Act regulations for SPCCPs only require plans to be made before facility operation. 40 CFR § 112.3. Therefore, as discussed with and agreed to by the Commission staff, Altamont intends to file a suitable SPCCP prior to construction rather than prior to completion of the EIS. The final EIS should be modified accordingly.	AL2-58	Comment accepted. See change to Chapter 4C and DEIS Recommendation 7.
AL2-59	4C-7;Table 4C-3	The Beaver Creek discharge location should read "508.0," not "481.0."	AL2-59	Comment accepted. See change to Chapter 4C.

	Page/Para/Line	Comment or Question		
AL2-60	4C-9; 5; 2	The DEIS recommends that Altamont be required to submit a groundwater monitoring plan for inclusion in the final EIS. However, Altamont notes that, on p. 6-30 (#6), the plan is only required to be filed "prior to construction." Therefore, as discussed with the Commission staff, Altamont intends to file a suitable groundwater monitoring plan prior to construction, rather than prior to completion of the EIS. The final EIS should clearly reflect this.	AL2-60	Comment accepted. See change to Chapter 4C.
AL2-61	4C-12; 3; All	Altamont should be allowed to use other alternative dry crossing procedures in addition to "fluming," as was specified in the DEIS. "Dam and pump", "no dam and pump", and "diversions" are each acceptable alternatives to fluming. Every minor stream crossing containing coldwater or warmwater fisheries considered significant by the state fish management agency may not lend itself to fluming, and fluming may not be appropriate on streams with low gradients or steep approach slopes. The EIS should be revised to allow for these alternatives to be used.	AL2-61	Comment noted. See response to Comment AL2-49 above and changes to Appendix C-3. We do not agree with the generic statement that the methods referenced in this comment are acceptable alternatives to fluming. We also note that use of these techniques may require an individual Section 404 permit.
AL2-62	4C-15; 3; All	*See* comment on page 4C-3, para. 2, line 4.	AL2-62	See response to Comment AL2-56 above.
AL2-63	4C-15; 4; All	As stated previously in Altamont's comment on p. 4C-3, para. 2, line 8 and elsewhere, Altamont believes that a burial depth of 30 feet at the Missouri River crossing is excessive. A shallower burial depth will reduce impacts from those predicted here, possibly negating the need for directional drilling. The actual depth of burial should be determined by Altamont's studies to be conducted at the Missouri River and the EIS should be revised to allow this. *See also* comment on page 4L-7, para. 2.	AL2-63	Thank you for your comment. See response to Comment AL2-28 above.
AL2-64	4C-16;1;7	*See* comment on page 3F-6, para. 6, line 1.	AL2-64	Comment accepted. See change to Chapter 4C.
AL2-65	4C-16; 2; All	*See* comment on 4C-3, para. 2, line 4. In addition, installation of the pipe into a blasted trench below shallow alluvial bed materials would protect the pipe from scour, increasing pipe stability. Finally, standard calculations of scour depth assume erodible materials, not bedrock. Thus, Montana's floodplain standards regarding depth of burial below the maximum "calculated" scour depth should not be applied in this case. In sum, the Commission should not specify directional drilling of the Yellowstone for the final EIS.	AL2-65	Thank you for your comment. See response to Comment AL2-29 above.
AL2-66	4D-10;3;7	This should read "2-3 days" and NOT "2-3 weeks".	AL2-66	Comment noted. See change to Chapter 4D.

	Page/Para/Line	Comment or Question		
AL2-67	4D-11;2;1	This should read "Byron" and NOT "Bryon".	AL2-67	Comment accepted. See change to Chapter 4D.
AL2-68	4D-11;4;3	See comment on p. 2-51, para. 4, line 6.	AL2-68	Comment accepted. See change to Chapter 4D.
AL2-69	4D-11; 5; 1	The DEIS indicates that "[t]he crossing of the Wind River Mountain Range through South Pass could cause inconvenience to visitors traveling to historical sites in the area." Altamont's proposed route through the South Pass area is through open, rolling terrain, not mountainous topography. This sentence should thus be revised to read: "The crossing of gentle foothills of the Wind River Mountain Range through the South Pass area could cause..."	AL2-69	Comment noted. See change to Chapter 4D.
AL2-70	4D-11; 6; 5	The DEIS states that "[t]he pipeline right-of-way should avoid crossing the boundaries of this Landmark in consideration of special provisions for the care of [National Historic Landmarks], as stipulated by the NHPA and its implementing regulations." This statement should be revised to reflect the route realignment submitted to FERC by Altamont in November 1990, and shown on the maps in the DEIS, which avoids the NHL. As a result, the EIS should also be revised to conclude that, because the route would avoid the NHL, impacts to the NHL are considered "less than significant."	AL2-70	Comment noted. See change to Chapter 4D.
AL2-71	4E-5	Altamont suggests that this section be rewritten to reflect the fact that Altamont will cross no large tracts of mature forest.	AL2-71	Comment noted. The discussion of Impacts and Mitigation Measures Specific to the Altamont Project identifies that Altamont would cross very little forested land.
AL2-72	4E-6, 7, 8; Wildlife Section	The discussion on impacts to wildlife from "forest clearing" relate solely to the PGT/PG&E project. Altamont will only clear 30.8 acres of forest which will not have any material impact on wildlife. (See Table 6-2 (DEIS at 6-14)).	AL2-72	Thank you for your comment.
AL2-73	4E-9; 5; All	Altamont will employ appropriate sediment control techniques in wetland areas. These techniques include the use of sediment filter devices around spoil piles and at the downslope edges of the right-of-way in all wetland areas. However, the use of sediment filter devices on the upslope side of the right-of-way, or on either side of the right-of-way in level terrain is unnecessary because there is little to no potential for sediment transport under these conditions. The EIS should be revised to allow this alternative approach.	AL2-73	Thank you for your comment. See response to Comment AL2-49 and revised Appendix C-3.
AL2-74	4E-10; 2; All	Altamont agrees with the DEIS' observation that many wetlands crossings can be constructed using a 75 foot right-of-way, except where the wetland is adjacent to a	AL2-74	See response to previous comment.

	Page/Para/Line	Comment or Question		
AL2-74 (cont.)		water crossing. Where the wetland is adjacent to a water crossing, however, additional working space (i.e., staging area) is necessary. (*See* DEIS p. 2-52). Therefore, the EIS should be revised to permit extra space in those circumstances.		
AL2-75	4E-11; 4; 6	The DEIS states: "[I]n addition, we recommend that PGT and Altamont develop, in conjunction with the appropriate state agencies, site-specific revegetation plans for all riparian areas, and to submit these plans for inclusion in the Final EIS." However, on page 6-30, (#5), these plans are requested "prior to construction." As discussed with the Commission staff, Altamont will file site-specific revegetation plans for all riparian areas prior to construction, rather than prior to completion of the EIS. The EIS should be revised to clearly reflect that procedure.	AL2-75	Comment accepted. See change to Chapter 4E.
AL2-76	4E-49;4;5	The DEIS states that "[n]o mitigation is required." Altamont has, however, prepared a preliminary rehabilitation plan that covers Montana.	AL2-76	Thank you for your comment.
AL2-77	4E-51;2;6	"Otto personal communication" should be cited in Chapter 7, Bibliography.	AL2-77	Comment noted. See change to Chapter 4E.
AL2-78	4E-55;5;5	The DEIS states that "[n]o curlews were observed in recent surveys along the pipeline route, although one pair was observed by ONRC staff in June 1990 north of Shawmut." Altamont suggests revising this sentence to read: "....north of Shawmut, about 5 miles east of the pipeline route." This will make it clear that the pipeline is not likely to affect the curlews.	AL2-78	Comment accepted. See change to Chapter 4E.
AL2-79	4E-58; 2; 1	The DEIS states that "[c]onstruction would disturb 139 acres of eastern ponderosa pine forest." However, Table 4E-10 on p. 4E-50 shows that only 10.8 acres will be affected. Because the Table is correct, the text should be corrected to be consistent with the Table.	AL2-79	Comment accepted. See change to Chapter 4E.
AL2-80	4E-58; 6; All	Altamont disagrees with the DEIS' claim that the Altamont project may affect or have a significant impact on substantial populations of these special-status plant species. It is unlikely that the Altamont project would affect substantial portions of populations of the plant species listed, given the wide distribution of populations well outside of the pipeline route. Small rockcress would be the only species significantly affected, if portions of its population were destroyed. However, such an impact is also very unlikely, as the closest known population is	AL2-80	Thank you for your comment. Until Altamont performs field surveys for these species, our analysis and recommendation stands.

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AL2-80 (cont.)		6 miles from the pipeline route. Therefore, this paragraph should be revised to indicate that these impacts would be less than significant.		
AL2-81	4E-59;Table 4E-13	This table is inconsistent with Appendix E-4. Table 4E-13 lists two species that are not in Appendix E-4, while Appendix E-4 lists two species that are not in Table 4E-13. Also, Table 4E-13 lists state heritage program species which, according to page 3E-1, para. 3, line 1, were not considered special status species. Table 4E-13 should be revised to be consistent with the rest of the EIS.	AL2-81	Comment accepted. See revisions to Table 4E-13 and Appendix E-4.
AL2-82	4E-60; 1; 2	The DEIS indicates that Fremont's bladderpod might be affected on a "limestone outcrop." However, this outcrop is at Beaver Creek Cliff, and Altamont has changed its proposed route to avoid this area. The EIS should thus be revised to eliminate this assertion.	AL2-82	Comment noted. See revisions to Chapter 4E and Appendix E-4.
AL2-83	4E-60; 3; All	The DEIS says that " ...Altamont's proposed route would cross approximately 2,000 feet of ephemeral emergent wetland at MP 450.2." Altamont disagrees with this statement. This segment of the route is a deflation basin and not an emergent wetland. Deflation basins should not ordinarily be considered wetlands pursuant to Section 404 of the Clean Water Act. In any case, Altamont filed the required route changes at Kirby Creek and Little Sandy Creek on November 28, 1990, which would avoid these basins. Thus, this sentence should be deleted.	AL2-83	Thank you for your comment. Absent actual results from wetland filed delineation surveys, our analysis stands. In addition, the realignments which Altamont voluntarily made in response to our draft recommendations are unrelated to the deflation basin located at MP 450.2.
AL2-84	4E-61;3;All	After reference to "Allen's 13-lined Ground Squirrel," Altamont recommends adding the sentence: "Clark and Stromberg (1987) reported that this species may have been extirpated in Wyoming, due to widespread poisoning."	AL2-84	Comment accepted. See change to Chapter 4E.
AL2-85	4E-62; 7; 3	The DEIS states that "[r]emoval of riparian vegetation on crucial seasonal ranges is significant because the ranges provide important forage and cover for moose and this habitat would not recover quickly." This is not accurate. The species that is crucial to moose winter range is primarily willow. Willow would recover quickly. Furthermore, only a small amount of willow would be removed during construction of the pipeline, because willow appears in only limited sections along the route. Therefore, Altamont suggests that this sentence be revised to read: "Removal of riparian vegetation on crucial seasonal ranges is less than	AL2-85	Comment noted. Given the limited amount of riparian habitat available on crucial seasonal ranges for moose, we believe that this impact is significant, but could be mitigated to less-than-significant levels by replanting willow saplings/poles in areas disturbed by construction.

	Page/Para/Line	Comment or Question		
AL2-85 (cont.)		significant because only a small amount of this habitat would be disturbed, and it would recover quickly."		
AL2-86	4E-64;8;4	"Farmer personal communication" should be cited in Chapter 7, Bibliography.	AL2-86	Comment noted. See change to Chapter 4E.
AL2-87	4E-65; 3; All 4E-65; 5; All	Altamont intends to study only the selected route for the occurrence of special-status plants.	AL2-87	Comment accepted. See change to Chapter 4E.
AL2-88	4F-3; 2; 5	See comment on p. 4C-12, para. 3.	AL2-88	See response to Comment AL2-61 above.
AL2-89	4F-3; 5; 1	The DEIS states that "[i]f the stream crossing area contains spawning habitat, instream construction would directly disturb the substrate for a maximum width of 75 feet." However, this 75 foot restriction may be impossible to achieve at open cut crossings of major rivers, where the spoil pile is placed in the water. The final EIS should acknowledge this.	AL2-89	Comment accepted. See change to Chapter 4F.
AL2-90	4F-5; 1; 6	The DEIS requires that trenches be back-filled with one foot of gravel. However, gravel is not always available. The EIS should be revised to allow for the use of crushed stone as an alternative.	AL2-90	Comment accepted. See change to Chapter 4F.
AL2-91	4F-5; 2; 7	Recent discussions with state agencies having control over surface water rights indicate that, under certain circumstances, it is acceptable to remove water at withdrawal rates in excess of 10% of the stream flow. Therefore, the DEIS' suggestion that withdrawals should always be limited to 10% should be changed to allow for withdrawals approved by the relevant state agencies.	AL2-91	From the standpoint of water rights, withdrawal rates in excess of 10 percent may be acceptable. However, Chapter 4F analyzes withdrawal rates in terms of impact to aquatic organisms. Therefore, our analysis and conclusion stands.
AL2-92	4F-5;5;4	The statement "....for an species,...." should be corrected to read "any species."	AL2-92	Comment accepted. See change to Chapter 4F.
AL2-93	4F-8;3;13	Drilling may take a more substantial period of time than the DEIS indicates, depending on geological conditions. The EIS should reflect this fact.	AL2-93	Comment noted. See change to Chapter 4F.
AL2-94	4F-8; 3; All	See comment on page 4L-7, para. 2.	AL2-94	See response to Comment AL2-109 below.
AL2-95	4H-3;Table 4H-1	See comment on page 2-63; Table 2-13.	AL2-95	See response to Comment AL2-23 above.

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AL2-96	4H-3; Table 4-1 4H-7;4;1 4H-7;6;1 4H-7;7;1 4I-6;3;2 4I-7;5;1	See comment on page 2-63; Table 2-13.	AL2-96	See response to Comment AL2-23 above.
AL2-97	4H-6;1;2	The 500 hp standby auxiliary engine units proposed for each station likely will not operate in excess of 500 hours in any given year. Consequently, the annual No emission rates shown should be reduced to .58 tons from 9.68 tons.	AL2-97	Thank you for your comment. The EIS reflects the maximum potential NOx emission rate from the standby engines. Reduced hours of operation may be accepted as part of Altamont's state permit applications.
AL2-98	4I-1;1;3	The words "one and" should be inscribed in front of "one-half mile per day".	AL2-98	Comment accepted. See change to Chapter 4I.
AL2-99	4I-3;Table 4I-1	Recent field investigations performed by Altamont have confirmed that an unidentified building, approximately 2,400 feet southeast of the proposed compressor building, has been abandoned; therefore, this is not a noise sensitive area.	AL2-99	Comment accepted. See change to Chapter 4I.
AL2-100	4I-5; 3; 3	Given the minor route changes filed by Altamont with the Commission, the distance to the nearest farmhouse is actually 2,500 feet to the northeast, rather than to the south southeast. This should be clarified in the EIS.	AL2-100	Comment accepted. See change to Chapter 4I.
AL2-101	4I-7; 7; 1	See revised Table 2-13.	AL2-101	Comment accepted. See change to Chapter 4I.
AL2-102	4J-2;2;1	The reference should be changed to be 6 trucks per hour for PGT may be reasonable, but only 4 per hour for Altamont is reasonable.	AL2-102	Comment noted. See change to Chapter 4J.
AL2-103	4K-1;3;2	"Unconfirmed" should be "Unconfined".	AL2-103	Comment accepted. See change to Chapter 4K.
AL2-104	4L-3; 1; 3, 4	The DEIS states that "[m]ainline valves typically consist of a vertical loop of the pipeline that extends approximately 4 feet out of the ground with the valve at the top of the loop." This statement is not true for Altamont's pipeline. Altamont proposes to bury all sectionalizing valves. Only the blowdowns and valve operators would be above ground level. Thus, visual impacts will be less than stated. This paragraph should be revised accordingly.	AL2-104	Comment noted. See change to Chapter 4L.
AL2-105	4L-4; 2; 1	The DEIS states that "[s]taging areas and additional rights-of-way should be located at least 50 feet from the roadside." However, Altamont will need a larger working area at major road crossings to accommodate a	AL2-105	Comment noted. The intent of this mitigation measure is to ensure that existing trees are left at sensitive road crossings. See change to Chapter 4L.

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AL2-105 (cont.)		bell hole and extra spoil which results from boring under the road. When boring roads, it is customary to start the edge of the bell hole as close to the road as feasible, often closer than 50 feet, in order to minimize the length of the bore. Altamont proposes to do this, unless trees exist at the crossing, in which case it will respect the 50 foot setback suggested here. The EIS should be revised to account for these engineering problems.	
AL2-106	4L-4; 3; 1	Altamont will locate staging areas at least 50 feet, rather than 100 feet, from the streambank or beyond the riparian zone. The 50-foot setback, in conjunction with sediment control techniques, will provide adequate protection to the waterway. Moreover, the surrounding topography (i.e., steep slopes) at some streams preclude a 100-foot setback.	AL2-106 Comment noted. Our intent is to provide extra protection to riparian vegetation at sensitive stream crossings. The mitigation measure requires the staging area be at least 100 feet from the stream bank or beyond the riparian zone. See revised language in Chapter 4L.
AL2-107	4L-4; 3; 4	It is impractical to return all rocks to their original location and depth, or soil line. The sentence should be revised to read, "Boulders should be returned to their original locations and set to the original soil line, and rocks should be returned to their original general locations where possible."	AL2-107 Comment noted. See change to Chapter 4L.
AL2-108	4L-4; 5; 1	The DEIS requires that "[a]ll disturbed land should be restored to the original contours". This will not be possible in all cases, because of site-specific geotechnical reasons. For example, overly steep slopes (e.g., 3 to 1) cannot be safely restored. Therefore, the EIS should be revised to state that disturbed land will be restored to approximate original contour if economically and technically practical.	AL2-108 Comment noted. We have recommended this mitigation measure only for specific areas that have a high degree of visual sensitivity and warrant special construction techniques.
AL2-109	4L-7; 2; All	Altamont disagrees that "directional drilling" of the Missouri River should be required, until it is determined if it is technically feasible and necessary. (See earlier comments about this at 3C-11, para. 2, lines 3; 4C-3, para. 2, line 8 and 4C-5; Table 4C-5; 4C-15, para. 4; 4C-16, para. 2). While, the BLM's jurisdiction over this recreational segment of the UMNWSR is bank-to-bank, private farmland occurs adjacent to both banks. There are less drastic mitigation measures to protect the visual character of the river than directional drilling. For example, Altamont proposes to cross in a location where only one or two cottonwood trees would be removed. Secondly, Altamont would restore and rehabilitate the banks as is suggested in the next paragraph of the DEIS for the	AL2-109 Comment noted. See response to Comments AL2-28, -29, and -56 above. We agree that visual impacts on the riverbanks that would result from an open-cut crossing could be mitigated to less-than-significant levels. See change to Chapter 4L. For the reasons discussed in Chapter 4F, we disagree with the contention that directional drilling should not be required at the Missouri River. The DEIS clearly supported our determination that it would be "necessary" to use this technique at this crossing.

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AL2-109 (cont.)		Yellowstone River. Altamont suggests that these measures would be effective in screening the crossing, making directional drilling of the Missouri unwarranted for visual protection reasons. In any event, the Missouri River crossing is ideally suited for conventional open cut techniques, depending upon the result of site-specific studies we have said will be done in our earlier comments. Therefore, the Commission should allow Altamont the option of using an open cut method to cross the Missouri.		
AL2-110	4L-8; Table 4L-3	Table 4L-3 should be revised to reflect the realignment in the South Pass area, submitted by Altamont to FERC in November 1990 and included in the maps with the DEIS.	AL2-110	Comment accepted. See change to Table 4L-3.
AL2-111	4L-9; 2; All	Based on Altamont's interpretation of Map 3-29 in the Lander Resource Management Plan (BLM, 1986), there are no VRM Class II lands in this segment, contrary to the DEIS' suggestion. Furthermore, Altamont's route parallels an existing pipeline for 13 miles of this segment which, in any event, should be considered only as an incremental impact (see comment on page 3L-5, para. 3, lines 5-6). The EIS should be modified accordingly.	AL2-111	Comment noted. We agree that this entire interval is not designated VRM Class II. However, specific locations within the interval are Class II, as shown in DEIS Table 4L-3. Regardless, we have determined that the visual impacts would be less-than-significant in this interval. See revised Chapter 4L. See also response to Comment AL2-42 above.
AL2-112	4L-9; 3; All	The portion of this segment within the Lander Resource Area of BLM's Rawlins District (MP 510.9-522.3) is classified as VRM IV, not VRM II, as suggested in the DEIS. (Lander Resource Management Plan, 1986). As required by Mitigation Measure No. 66 (p. 6-40), Altamont has submitted a construction and rehabilitation plan to minimize visual intrusion in the area. Any "scar" will therefore be temporary, and the EIS should be revised to reflect this.	AL2-112	Comment noted. Due to the scale of the resource maps published in the Lander RMP, the question of VRM designation along the route can be disputed. Since Altamont has proposed mitigation for the South Pass area that would reduce the visual impacts to less-than significant levels, this point does not warrant further discussion. See revised Chapter 4L.
AL2-113	4L-9;4;4	The Ferson Compressor Station is located in the next segment. Its reference should be moved down one paragraph.	AL2-113	Comment noted. See change to Chapter 4L.
AL2-114	4L-9; 5; 4,5	Altamont does not agree with the DEIS' observation that "[c]onstruction of the pipeline would scar the landscape." Implementation of Altamont's Construction and Rehabilitation Plan -- MP 511.0 to MP 540.8 -- will minimize visual intrusion in the most sensitive part of this segment. Any "scar," therefore, will be temporary. In addition, Altamont proposes to bore underneath the Oregon Trail at its intersection with SR 28. The EIS should be revised accordingly.	AL2-114	Comment noted. See change to Chapter 4L.

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AL2-115	4L-9; 6; All	This segment (MP 561.0 to 613.3) of Altamont's pipeline route crosses the Green River Resource Area of BLM's Rock Springs District. Based on conversations with BLM personnel, Altamont has learned that the VRM inventory for the Resource Area is currently being prepared as part of BLM's plans to publish a Resource Management Plan for the Resource Area in the next one-to-two years. Accordingly, this segment of the route is currently unclassified for VRM classes. The EIS should be revised to indicate that this segment is not Class II, but rather "unclassified."	AL2-115	Comment noted. See response to Comment AL2-111 above and revision of Chapter 4L.
AL2-116	4M-2; 6; All 6-43; 1; 2	The reference to "mitigation plans and reports" should refer to Historic Property Treatment Plans and not to reports that will not be prepared until after completion of construction. The final Mitigation Report will be completed in 1994 or 1995 and will contain analyses of all the data collected prior to and during construction, including trench monitoring and emergency discoveries.	AL2-116	Comment noted. As the lead Federal agency responsible for compliance with Section 106 of the National Historic Preservation Act, we are aware that the final report(s) would not be available until after the proposed construction date. However, if "mitigation plans" are found to be necessary, they may well entail subsequent preparation of "mitigation reports". The referenced phrase did not use the word "final".
AL2-117	4M-6;2;4	The AT&T right-of-way apparently contains an "L4 co-axial cable" and NOT a "fiber optic cable".	AL2-117	Comment noted. See change to Chapter 4M
AL2-118	4M-6;Footnote	This should read "November 28, 1990".	AL2-118	Comment accepted. See change to Chapter 4M.
AL2-119	4M-7; 2; 6	The proposed Continental Divide route realignment filed with FERC on November 28, 1990, deviates to the north immediately to the west of the original Sweetwater River crossing connecting at MP 527.1 and not, as the DEIS states, at MP 526.0. This realignment was made to make the pipeline route essentially invisible from the South Pass Center on SR 28 at the Sweetwater River.	AL2-119	Comment accepted. See change to Chapter 4M.
AL2-120	4M-8; 4; 2	Altamont is prepared to bore trails listed on or eligible for the National Register of Historic Places, if ground conditions permit.	AL2-120	Comment accepted. See change to Chapter 4M.
AL2-121	4M-8; 5; All	Altamont submitted the results of its computer file search on the proposed route with the Wyoming State Historical Preservation Office (SHPO) as part of its Class 1 study filed on January 17, 1990. Altamont submitted similar information on the alternate routes to the Commission staff on October 11, 1990. Altamont suggests that there should be sufficient information available to make a comparison of the known cultural resource sites.	AL2-121	Comment accepted. See change to Chapter 4M.
AL2-122	5-2;3;6	See comment on page 4M-6, para. 2, line 4.	AL2-122	See response to Comment AL2-117 above.

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AL2-123	6-14;Table 6-2	"Acres of cropland temporarily disturbed" under Kern River is not 1814.9 as shown. This number applies instead to PG&E's facilities. This needs to be corrected to less than 30 acres that would be disturbed. "Number of land use policy/ regulatory conflicts - 1." This number should read "0" now that Altamont has filed a reroute to avoid the NHL at South Pass.	AL2-123	See response to Comment AL2-3 above.
AL2-124	6-19;4;5	The statement "one of its existing stations" needs to be verified. Why NOT both stations?	AL2-124	See FEIS Chapter 4H. As stated there, Kern River Compressor Station No. 4 is not presently considered a major emission source. Installation of an additional 10,000 hp of compression would not be expected to increase overall NOx emissions at this station to 250 tons annually.
AL2-125	6-29; 1; All	Altamont strongly supports the statement "that the proposed route, as modified by [the] recommended realignment at MP 526-538.2 and the other recommended mitigation measures... could be constructed and operated in an environmentally acceptable fashion. Indeed, based on information filed with the Commission, the proposed route would have all of the following comparative advantages over the alternative routes: o The proposed route is 192.0 miles in length. It is shorter than the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 variations by 39.3, 33.5, 50.5 and .5 miles, respectively. o The proposed route disturbs a total of 2,327 acres, which is 476, 406, 612 and 6 fewer acres than that disturbed by the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 variations, respectively. o The proposed route crosses 26.4 miles of badland, rough and steep terrain, which is 15.9, 19.6, 37.5 and .5 (minimum) miles less than that crossed by the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 variations, respectively. o The proposed route crosses 11.9 miles of sand dunes, which is 28.5, 15.0, 16.3 and 0 miles shorter than associated with the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 variations, respectively.	AL2-125	Thank you for your comment.

AL2-125
(cont.)

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- Fifty-two percent of the proposed route is rated "fair" or better for soil rehabilitation potential, as compared to 41%, 44%, 39% and 50% for the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 variations, respectively.

- The proposed route and the Northern Utilities variation would likely affect a fewer number of sensitive plant species than any of the other variations.

- The proposed route crosses 882 acres of important big game range, which is 902, 491, 830 and 84 fewer acres than the Jeffrey City, Alkali Butte, Northern Utilities and Route 28 variations, respectively.

- The proposed route will have less of an air and noise pollution impact because it will require only six compressor stations, rather than the seven that the alternatives would require.

See Evaluation of Alternative Routes in Southern Wyoming, filed with the Commission on March 15, 1990; Letter to Kevin Madden from Altamont (with attachments), filed on May 7, 1990 with the Commission (responding to FERC data request No. 90, 91, and 92); Construction and Rehabilitation Plan, MP 511.0 to 540.8, provided to the Commission and BLM staff on February 22, 1991 and formally filed with the Commission on March 4, 1991.

Moreover, for those resources on which the impact of the proposed route will be greater than that of the alternatives (*e.g.*, number of perennial stream crossings), appropriate mitigation measures will be implemented to minimize any such impacts. Such mitigation measures include installation of temporary bridges for vehicle crossings; dry crossing procedures rather than conventional wet crossings; cribwalling selected stream banks to recreate overhanging banks for fish habitat, and replanting willows at stream banks. (*See* MP 511.0 to 540.8 Construction and Rehabilitation Plan.)

Altamont further contends that there is sufficient information available to the Commission to compare the

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AL2-125 (cont.)		environmental effects of alternative routes and reach a valid conclusion as to the comparative environmental impacts of the alternatives (*see* comments on page 3D-36, para. 3, line 2 and page 4M-8, para. 5). Altamont also contends that there is insufficient environmental justification to warrant the selection of any of the route variations. The additional environmental effects, as set forth above, associated with the extra length of the variations override the environmental effects of the proposed route once mitigation measures are applied. While considerable concern over construction through the South Pass area has been expressed, the fact remains that the proposed route, given the minor realignment made November 28, 1990, does not cross a single National Park or Monument, Wilderness Study Area, National Wild or Scenic River (outside designated utility corridors), National Forest, National Wilderness Area, National Primitive Area, BLM Area of Critical Environmental Concern, Military Base, State Park or State Game Range and Management Area. Thus, there is no legitimate basis for denying a certificate along the proposed route.	
AL2-126	6-29; 4; 2	Mitigation Measure No. 2 requests alignment sheets at a scale not smaller than 1:6000. Altamont plans to prepare alignment sheets at a scale of 1:12,000 and requests that the EIS be modified to allow this. A 1:12,000 scale is more than adequate to present environmental information and specifications in the type of terrain encountered.	AL2-126 Comment accepted. See change to Chapter 6.
AL2-127	6-37;Footnote	Line 4 is incomplete and needs clarification.	AL2-127 Comment noted. See change to Chapter 6.
AL2-128	6-38; 2; All	*See* comments on Appendix B-3.	AL2-128 See responses to Comments AL2-148 through -161 below.
AL2-129	6-38; 3; All	As mentioned previously, Altamont disagrees with some of the seeding periods suggested. *See* comments on Appendices B-2 and 3 for details.	AL2-129 Thank you for your comment.
AL2-130	6-38; 7; 2	Altamont should not be required to use jute mesh in all disturbed areas, because livestock and wildlife may become entangled in the mesh. Moreover, jute netting is inappropriate for slope protection in the drier climates traversed by Altamont's pipeline route, because in drier climates jute mesh does not biodegrade readily. Instead, soil stabilization products such as geotextile mats, excelsior mats, excelsior blankets, or similar products will be used on unstable sites. If	AL2-130 Comment noted. See change to Chapters 4B and 6.

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AL2-130 (cont.)		revegetation lags completion of construction on areas adjacent to stream crossings by more than 30 days, these sites will be protected with jute matting or similar product for a minimum of 100 feet on either side of the waterway. The DEIS should be modified to allow Altamont the flexibility to stabilize slopes in the manner described above.
AL2-131	6-39;1;All	Mitigation Measure No. 55 should be shaded, since this request was complied with when Altamont filed a minor realignment on November 28, 1990.
AL2-132	6-39; 7; All	See comments on 4L-7, para. 2.
AL2-133	6-40; 12; All	Altamont transmitted a detailed construction and rehabilitation plan for MP 511.0 to 540.8 to FERC and BLM staff on February 22, 1991. The EIS should be modified to reflect this.
AL2-134	6-41;1;1-4	Mitigation Measure No. 67 should be shaded to indicate that Altamont's minor realignments filed on November 28, 1990 comply with this condition.
AL2-135	B-1-1; 1; All	Altamont intends to prepare a detailed erosion control, revegetation and maintenance plan for the entire route prior to construction, based on site specific studies of soils, vegetation, slope, drainage, agricultural land use, and other factors. This information will be used to satisfy BLM provisions for issuing rights-of-way grants on federal lands and to assure private and state land owners that adequate measures have been taken to protect and restore their lands during and following construction. However, many of the provisions in Appendix B to the DEIS are generic in nature and applicable to regions other than those crossed by the Altamont route. Examples are provided below, along with suggestions for changes to be made in the final EIS. Altamont proposes to work closely with the staffs of the Commission, BLM, BOR, ONRC, Montana and Wyoming State Lands, local Soil Conservation Districts and private landowners/occupants in the course of preparing its detailed plans, because numerous deviations based on actual site conditions will be required. These plans will be submitted to the Commission prior to construction.

AL2-131	Comment accepted. See change to Chapter 6.
AL2-132	See response to Comment AL2-109 above.
AL2-133	Comment accepted. See change to Chapters 4B, 4L, and 6.
AL2-134	Comment accepted. See numerous changes throughout the FEIS, including Chapters 2, 3L, 3M, 4L, 4M, and 6.
AL2-135	Thank you for your comments. As you know, our Erosion Control, Revegetation, and Maintenance Plan (Plan) was tailored to address both the Altamont and PGT Projects. As such, all elements may not be relevant to both proposals. Specific deviations requested by either applicant have not been included unless it would be applicable to both projects. However, as stated in response AL2-49 above, DEIS Recommendation 4 would allow us to waive specific requirements or allow deviations from the Plan in response to site-specific requests forwarded in a timely fashion. Landing Managing agencies could approve deviations on lands under their administrations, and landowners may specify other seeding requirements.

	Page/Para/Line	Comment or Question		
AL2-136	B-1-2; II. C; All	This paragraph needs clarification because it is ambiguous and Altamont is unable to ascertain what the Commission wants. If the DEIS is referring to ramps across the bar ditch of roads and highways, Altamont proposes to construct temporary subsoil ramps. Topsoil previously stripped will be stockpiled separately. Altamont does not propose to use off-site materials such as crushed stone, but will maintain all roads in a safe and passable condition.	AL2-136	Comment noted. See response to Comment AL2-49 above. Altamont would be required to adhere to this particular provision of our Plan unless local permit conditions dictate otherwise.
AL2-137	B-1-2; III. A; All	See comments on page 4B-5, para. 3,4,5.	AL2-137	See response to Comment AL2-50 above.
AL2-138	B-1-3; III. D; All	It is not necessary or practicable to construct and maintain temporary slope breakers during construction. Permanent slope breakers will be installed, where necessary, during final cleanup.	AL2-138	Thank you for your comment. See response to Comment AL2-135 above.
AL2-139	B-1-3; III. E; All B-1-4; III. E; All	Retaining vegetative strips and placing silt fences is not warranted at roads crossed at the base of slopes or at all stream crossings, given the reduced precipitation levels experienced in Montana and Wyoming. Experience has shown that improperly placed bales have led to severe erosion and washouts in sudden rainstorms. If construction occurs during periods of excessive rain, Altamont will take appropriate erosion control measures. Therefore, this provision of the EIS should be modified to allow Altamont appropriate flexibility.	AL2-139	Thank you for your comment. See response to Comment AL2-135 above.
AL2-140	B-1-4; III. G; All	Trench breakers are designed and installed to reduce the potential for water running down the trench line and eroding the backfill material. Specific locations and spacing will be determined in the field and should not be dictated by "rule of thumb" practices. Rather, they will be based on site-specific soil and climactic (*i.e.*, rainfall) conditions. Altamont proposes to select the locations for all trench breakers utilizing sound engineering practices during the construction phase of the project.	AL2-140	Thank you for your comment. See response to Comment AL2-135 above.
AL2-141	B-1-4; IV. D; All	It is not always feasible for permanent erosion control measures to be installed within such a short period after the trench is backfilled. Frequently, although sections of the pipeline may be backfilled and clean-up finished, access to the right of way may still be needed for the tie-in crews and for hydrostatic testing. Thus the wording in the DEIS should be changed to state that erosion control measures will be installed "within 10 days after the trench is	AL2-141	Thank you for your comment. See response to Comment AL2-135 above.

	Page/Para/Line	Comment or Question		
AL2-141 (cont.)		backfilled and access for construction is no longer needed, provided weather and soil conditions permit."		
AL2-142	B-1-5; IV. F; All	The spacing requirement for slope breakers (berms or waterbars) should be used as a rough guideline rather than a universal rule, as currently stated in the DEIS. Different soil textures have varying susceptibility to erosion by water. Actual spacing should be determined by field judgment. The EIS should be revised to allow Altamont flexibility in this regard.	AL2-142	Thank you for your comment. See response to Comment AL2-135 above. Page B-1-1 of our Plan acknowledges that some judgement is required in its application.
AL2-143	B-1-5; V. A3; All	A smooth seedbed is undesirable in areas prone to wind erosion and should not be compelled. The EIS should be revised to allow Altamont to leave soil surface in a roughened condition to create an irregular seedbed which will trap seed and snow, provide microsites for seed germination, reduce the effects of wind and reduce soil movement on steeper slopes.	AL2-143	Comment accepted. See change to Chapter B-1.
AL2-144	B-1-6; V. B1; All	The mulching techniques described in this paragraph (jute matting and straw mulching) are not flexible enough for the varied environmental conditions along Altamont's route. For example, jute matting is not actually a mulch. It is more properly considered a seed and erosion control blanket. Jute matting may not be appropriate at many sites along the Altamont route, particularly where jute will not biodegrade easily because of the dry climate. Similarly, two tons/acre of straw mulch may be excessive in these dry climates, as such an amount of mulch will take too long to degrade and can "choke out" seeded areas. One to 1.5 tons/acre, if properly applied and crimped, should be sufficient. However, successful crimping may be difficult in rocky soils, and crimping may be aesthetically unacceptable in visually sensitive areas. Therefore, Altamont proposes to supplement these techniques with other mulching methods, such as hydromulching or excelsior mats, to create the flexibility needed for successful rehabilitation of the Altamont right-of-way. The EIS should be revised to reflect these corrections.	AL2-144	Comment noted. Appendix B-1 has been revised to allow for lower mulching rates in drier climates.
AL2-145	B-1-7; V. C4; All	Broadcast seeding should be used, as opposed to drill seeding, in order to achieve a better distribution of plants, eliminate unsightly drill rows, and to permit better establishment of small-seeded species. The EIS should be revised to allow broadcast seeding.	AL2-145	Comment noted. See revision to Appendix B-1.
AL2-146	B-1-7; V. D; All	See Comments on page B-1-6, para. V.B.1.	AL2-146	See response to Comment AL2-144.

	Page/Para/Line	Comment or Question		
AL2-147	B-1-9; VII. F; All	Revegetation to provide 70 percent cover is not, as the DEIS seems to specify, appropriate for the Altamont route. High rainfall areas are not present and revegetation success should be based on comparison to adjacent vegetation. Likewise, one-plant-per-square-foot may not be appropriate for some badland-type areas, because there is no existing vegetation in such areas and overplanting would create a sharp contrast to existing, adjacent areas. Success should be based on comparison to adjacent vegetation after two or three growing seasons, after consultation with relevant agencies. The EIS should be revised accordingly.	AL2-147	Appendix B-1 allows for the use of adjacent undisturbed cover as a guide for determining whether or not revegetation is successful.
AL2-148	B-3-1; A1; All	Altamont believes that these seeding rates, as revised by the Commission, are quite low for successful revegetation featuring mainly native species on relatively harsh (e.g., arid, windy, alkaline, acidic, etc.) sites. In particular, the seeding rates specified by the Commission for the sandy, high erosion potential, saline, acidic and alkaline/sodic mixtures are extremely low and may result in poor "takes." Furthermore, recalculation of seeding rates based on pounds PLS, rather that PLS/square foot, can result in unbalanced ratios of various species within a given mixture. It is more effective and ecologically balanced to formulate seeding mixtures on PLS/square foot for each species. Therefore, Altamont suggests that the original seed mixtures submitted in its Environmental Report be retained, instead of the recalculated mixtures presented in the DEIS.	AL2-148	Thank you for your comments. See response to Comment AL2-55 above and revisions to Appendix B-3.
AL2-149	B-3-1; A2; All	Blue grama was omitted from the original seeding mixtures submitted by Altamont. Altamont believes it should be retained. Blue grama is a drought-tolerant native species already growing along much of the route, and using it will help blend the pipeline right of way into the surrounding landscape. It has already proved its value for aesthetics and erosion control through its successful use in a variety of reclamation projects in Montana and Wyoming. In addition, it will not attract excessive grazing by wildlife or livestock.	AL2-149	See response to State of Montana Comment SA7-73.
AL2-150	B-3-1; A6; All	The DEIS recommends that sheep fescue be used only at sites above 5,000 feet in Montana, and 7,500 feet in Wyoming. Altamont disagrees with this recommendation. Sheep fescue has been used successfully in mine reclamation at elevations of 4,000 feet in Montana, and would likely be suitable at some sites below 7500 feet in Wyoming.	AL2-150	Comment noted. See revision to Appendix B-3.

	Page/Para/Line	Comment or Question		
AL2-151	B-3-1; B1; All	Sand bluestem, little bluestem and prairie coneflower were removed from the sandy site mixture. Altamont disagrees. These three species are important native components of sandy sites in this region. Altamont's consultants' experience with reclamation has shown that if broadcast seeding is used, these species will usually become established.	AL2-151	Comment noted. Little bluestem has been returned. See response to State of Montana Comment SA7-73 and revisions to Appendix B-3.
AL2-152	B-3-1; B2; All	Prairie coneflower was omitted from the loamy site revegetation mixture. Altamont disagrees. Altamont's consultants have planted this species successfully in reclamation projects in the region, and it provides increased diversity in the proposed seed mixture.	AL2-152	Comment accepted. See revisions to Appendix B-3.
AL2-153	B-3-1; B3; All	Inland saltgrass was omitted from the saline site revegetation mixture. Altamont disagrees. Inland saltgrass is well adapted to saline sites, is valuable for erosion control, and is not particularly palatable to wildlife or livestock. It will not attract wildlife or livestock to saline sites, thereby facilitating rehabilitation and blending of these sites with the surrounding landscape.	AL2-153	Comment accepted. See revisions to Appendix B-3.
AL2-154	B-3-1; B4; All	Thickspike wheatgrass and birdsfoot trefoil were omitted from the clay site mixture. Altamont disagrees. With the removal of thickspike wheatgrass, no sod-forming grass species remain in the mixture. In addition, a legume such as birdsfoot trefoil would be useful as a nitrogen fixer in clay soils.	AL2-154	Comment noted. Western wheatgrass was added. Birdsfoot trefoil was omitted because of opposition to this aggressive, introduced species. Native, adapted legumes may be added as an alternative as allowed by DEIS Recommendation 4.
AL2-155	B-3-2; B5; All	Inland saltgrass was omitted from the high erosion potential site revegetation mixture. Altamont disagrees. Inland saltgrass was originally included because it is a sod-forming grass which produces vigorous rhizomes and stolons and is relatively unpalatable to wildlife and livestock, and is therefore suitable for revegetation at high erosion sites.	AL2-155	Comment accepted. See revisions to Appendix B-3.
AL2-156	B-3-2; B6; All	Thickspike wheatgrass and western wheatgrass were omitted from the wet site revegetation mixture. Altamont disagrees. Removal of these species limits the sod-forming species in the mixture. "Garrison creeping meadow foxtail" was added to the wet site mixture. This species' designation is confusing. Actually, Garrison is the cultivar of creeping foxtail (Alopecurus arundinaceus); meadow foxtail (A. pratensis) was the species Altamont originally recommended. Similarly, "Basin wildrye" was added to the seed mixture, but is identified on page B-3-7 as	AL2-156	Comment noted. Western wheatgrass was returned, and another sod-forming species was substituted for Thickspike wheatgrass. Other changes have also been made. See revisions to Appendix B-3.

	Page/Para/Line	Comment or Question		
AL2-156 (cont.)		Elymus triticoides. E. triticoides is actually creeping (or beardless) wildrye. Basin wildrye is E. cinereus. The EIS needs to be changed to allow for both kinds of wheatgrass and to convert the description of species.		
AL2-157	B-3-2;B7; All	Inland saltgrass, crested wheatgrass and thickspike wheatgrass were omitted from the alkaline/sodic revegetation mixture. Altamont disagrees. All three of these species are sod-forming, which is important in erodible soils. Two of the species are alkaline/sodic tolerant. Although it is not a native grass species, the Ephraim cultivar of crested wheatgrass recommended by Altamont is a low-statuted (which will help blend the right-of-way with the surrounding landscape), sod-forming species, tolerant of a variety of soil conditions. (It is important to note that a considerable variety of alkaline/sodic conditions may be expected along Altamont's route).	AL2-157	Comment noted. Crested wheatgrass is opposed because of its non-native status and invasive growth habits. Inland saltgrass has been replaced. See revisions to Appendix B-3.
AL2-158	B-3-2;4-All.	The DEIS states that Indian ricegrass may be added to the seed mixtures used in Hill, Chotesu, Stillwater and Carbon Counties in Montana. Indian ricegrass is already a component of the sandy site mixture proposed by Altamont, and does not need to be specially designated for these counties. In addition, the difference between pound PLS/acre vs. PLS/square foot was discussed above in our comment to B-3-1; A1; All. The EIS should be corrected here as well.	AL2-158	Comment noted. See response to Comment AL2-55 above.
AL2-159	B-3-3; Table B-3-1	Altamont believes the seeding ratio of forbs to grasses is quite high for a sandy site mixture. In particular, the rate for white Dutch clover is high. Altamont's consultants have found that such high ratios are often not successful at sandy sites in this region.	AL2-159	Comment noted. See response to Comment AL2-55 above.
AL2-160	B-3-6; Table B-3-1	Altamont believes that the seeding rate for prairie sandreed is too low, since this is an extremely useful species for erosion control in this geographic region. Furthermore, this seeding mixture deleted Altamont's recommendation to use an annual rye. Altamont disagrees, since this deletion could result in increased initial erosion. Altamont believes that the increased total seeding rate for the high erosion potential mixture, recommended by the Commission, may be too high in that interspecific competition may defeat its purpose. Altamont believes that the ratio of forbs to grasses (particularly the rate for yarrow) is too high, since forbs are not as effective as grasses at stabilizing erodible soils. Finally,	AL2-160	See previous response. Several of your concerns, including deletion of creeping wheatgrass, have been addressed. See revisions to Appendix B-3.

	Page/Para/Line	Comment or Question		Response
AL2-160 (cont.)		Altamont does not know what "creeping wheatgrass" is. Clarification is required.		
AL2-161	B-3-9; Table B-3-1	Altamont believes the total seeding rate for alkaline/sodic soils is too low for these special site conditions.	AL2-161	See response to Comment AL2-159 above.
AL2-162	C-2-2 to 3	The Yellowstone River at MP 268.1 should be identified as Clark's Fork of the Yellowstone.	AL2-162	Comment accepted. See change to Appendix C-2.
AL2-163		The Beaver Creek minor realignment filed November 28, 1990 avoids a crossing of Stambaugh Creek.	AL2-163	See response to Comment AL2-37 above.
AL2-164	C-3-2; I.D7b; All	See comments on page 4C-12, para. 3.	AL2-164	See response to Comment AL2-61 above.
AL2-165	C-3-2; I.D7c; All	Altamont can complete instream construction at minor perennial stream crossings within 24 hours, unless blasting is necessary, in which case construction will proceed as quickly as possible. Therefore, the Commission should revise the EIS to allow Altamont additional time for construction, if blasting is required.	AL2-165	Thank you for your comment. See response to Comment AL2-49 above.
AL2-166	C-3-4; II. B1; All C-3-5; II. D2; All	See comment on page 4E-9; 5; All.	AL2-166	See response to Comment AL2-73 above.
AL2-167	C-3-5; II. C5; All	See comment on page 4E-10, para. 2.	AL2-167	See response to Comment AL2-74 above.
AL2-168	C-3-6; II. E2; All	The requirement of temporarily revegetating wetlands with annual ryegrass contradicts paragraph 2 on page 4B-6, which says temporary seeding is not recommended. The EIS should be revised to omit the requirement for ryegrass temporary revegetation.	AL2-168	Comment noted. See change to Chapter 4B.
AL2-169	E-2-1 to 4; Appen. E-2; All	See Comments of Altamont Gas Transmission Company on the DEIS at p. 13.	AL2-169	Thank you for your comment. See response to Comment AL2-13 in Altamont's preamble.
AL2-170	E-3-1 to 7; Appen. E-3; All	This table of wetland and riparian area crossings should be revised, based on the minor route realignments filed by Altamont on November 28, 1990.	AL2-170	Comment accepted. See changes to Appendix E-3 and various chapters of the FEIS.

Appendix B - Comments Regarding the Proposed PGT/PG&E Project

	Page/Para/Line	Comment or Question
AL3-1	S-12; Table S-2; 1	The FEIR identified 17 potentially active faults that the PG&E pipeline would cross in California. The DEIR originally indicated there would be 23 surface faults crossed by the combined PGT/PG&E project. The DEIS, on the other hand, identifies only 5 potentially active faults that the combined PGT/PG&E pipeline would cross. This discrepancy means that the DEIS erroneously incorporated the data from the FEIR and this should be corrected in the EIS to adopt the FEIR's conclusion.
AL3-2	S-12; Table S-2; 3	The DEIR identified 36.9 miles of land with high landslide potential that would be crossed by the combined PGT/PG&E project, while the FEIR identified 9.3 miles of such land crossed by the PG&E portion alone. The DEIS, on the other hand, identifies only 3.5 miles of such land that would be crossed by the PG&E portion and 12.2 miles by the PGT portion of this pipeline. This discrepancy means that the DEIS erroneously incorporated the data from the FEIR and this should be corrected in the EIS to adopt the FEIR's conclusion.
AL3-3	S-12; Table S-2; 9	The DEIS identifies 2 water body crossings with contaminated sediments for the PG&E portion, whereas the FEIR in Table 2-6 identifies 7 such crossings for PG&E. This discrepancy means that the DEIS erroneously incorporated the data from the FEIR and this should be corrected in the EIS to adopt the FEIR's conclusion.
AL3-4	S-12; Table S-2; 11	The DEIS identifies only 6111.7 total acres of land that would be temporarily disturbed by the PG&E portion, whereas the DEIR in Table 4B-1 identifies 12,394 acres that would be temporarily disturbed by PG&E. This discrepancy means that the DEIS erroneously incorporated the state's data and this should be corrected in the EIS.
AL3-5	S-13; Table S-2; 1	For acres of wetland/riparian habitat, Table S-2 fails to include the number of acres of vernal pool habitat crossed by the PGT/PG&E pipeline. As a result, the Table also does not show whether the project's impacts on such resources are considered temporary or permanent. Although these shallow pools are more susceptible to permanent and irreversible impacts from pipeline construction than estuarine, palustrine, riverine, or lacustrine wetlands, the DEIS fails to provide any discussion of the potential impacts to these isolated wetlands, including vernal pools near but not directly in the path of the proposed pipeline. (*See* DEIS at 3E-9/10 and Appendix E-2.) Indeed, the CPUC identified this as a serious potential problem with the PGT/PG&E route. (FEIR, Ch. 2.) Therefore, the Commission needs to specifically review the PGT/PG&E route to ascertain how much vernal pool

[STAFF'S RESPONSE TO APPENDIX B]

AL3-1 Thank you for your comment. We do not believe that all EIS data that are discrepant with those of the FEIR necessarily need to be corrected to reflect the FEIR's conclusions. The FEIS only incorporates relevant portions of the FEIR by reference. We do not view the FEIR's conclusions with regard to geological hazards within the PGT route to be relevant and, therefore, we do not incorporate such data into the FEIS. The PGT/PG&E project loops would cross two active surface faults in California and two elsewhere. We highlighted the faults crossed by the PGT route (see Table 3A-1 of FEIS) due to their documented Holocene activity. All other surface faults crossed by the PGT project route have been determined to exhibit Quaternary activity. We therefore stand by our analysis of available data.

AL3-2 Thank you for your comment. We cannot explain why there is such a large discrepancy between the CPUC's DEIR and the FERC's DEIS with regard to miles of landslide potential. In our attempt to reconcile the data contained in the two documents, we have examined them in detail in order to locate the areas that contained landslide potential. While the DEIS data is supported by specific locations that are delineated by milepost intervals (see EIS and EIS Map Volume), no such support was found in the DEIR, other than the stated 36.9 miles of landslide potential in Table 4A-1 of that document. Because the two documents are discrepant, it should not be automatically assumed that the DEIS is in error. We therefore stand by our analysis of available data.

AL3-3 Footnote C to both Table 5-2 and 6-1 indicates that the number "[o]nly includes waterbodies with known contaminated sediments" (emphasis added). Therefore, the number referenced in these tables is correct. Please refer to the CPUC's DEIR, Table 4C-3 and page 4C-5, for a discussion of this subject.

AL3-4 The number 6111.7 was taken from the Column "Construction Right-of-Way" for the Sate of California in the DEIR Table 3D-1. This corresponds to the PG&E project only impacts. Table 4B-1 in the DEIR identifies soil impacts for both the PGT/PG&E projects as a whole.

AL3-5 Thank you for your opinion. As you point out, the CPUC adequately addressed this issue in its FEIR. In addition, the CPUC, in its decision 8 December 27, 1990 authorizing the construction of PG&E's facilities, attached mitigation requirements which it determined would minimize or eliminate environmental impacts.

	Page/Para/Line	Comment or Question	
AL3-5 (cont.)		wetlands may be impacted by the pipeline and ensure that appropriate mitigation measures are required.	
AL3-6	S-13; Table S-2; 2	This Table only presents data on the "acres of forest temporarily disturbed" by the construction of the PGT and PG&E facilities (1743 and 858 acres, respectively). However, the narrative text of the DEIS (at 4E-5) states that forest vegetation will undergo permanent alteration. This discrepancy means that the DEIS erroneously incorporated the data from the FEIR and this should be corrected in the EIS to adopt the FEIR's conclusion.	Comment noted. Please see revised Chapter 4E.
AL3-7	S-13; Table S-2; 5	The DEIS identifies 0 acres of impacted big game habitat by the PG&E portion, while the FEIR (Table 2-6) indicates 1,266 acres of such lands impacted by PG&E. This discrepancy means that the DEIS erroneously incorporated the data from the FEIR and this should be corrected in the EIS to adopt the FEIR's conclusion.	Please refer to Table 4E-13 in the CPUC's DEIR, and Table 3-7 in the CPUC's FEIR, which support our conclusion that no big game habitat would be significantly affected by the construction of PG&E's facilities.
AL3-8	S-13; Table S-2; 6	The DEIS identifies 0 acres significantly affected upland game bird habitat for the PG&E portion, while the FEIR (Table 2-6) indicates 131 acres of such land impacted by PG&E. This discrepancy means that the DEIS erroneously incorporated the data from the FEIR and this should be corrected in the EIS to adopt the FEIR's conclusion.	See response to Comment AL3-7.
AL3-9	1-3; 3; 6, 7	The PGT construction schedule does not reflect the December 20, 1990 letter from Jack Fallin to the Secretary of the Commission regarding a revised tentative schedule.	Comment noted. See revised Chapter 1.
AL3-10	1-11; 4; 9	"A final CPUC decision is pending" should be replaced with "A final CPUC decision was issued December 27, 1990. Petitions for rehearing have been filed including one expressing the environmental concerns of the California Attorney General."	See revised Chapter 1.
AL3-11	2-21; 2	The DEIS does not appear to recognize that the CPUC (Decision 90-12-119, December 27, 1990) adopted an alternative alignment, Shasta County West Route Alternative, between mileposts 703 and 704 (CPUC Mitigation Measure 57a; Findings of Fact 157). Either the EIS should be amended to reflect the result of the CPUC's decision, or, if the Commission does not agree with that realignment, the EIS should be revised to explain the basis for the disagreement and to provide for another alternative re-route that avoids the impacts that the original route posed.	See revised Chapter 2.

	Page/Para/Line	Comment or Question
AL3-12	2-22; 3, 4	The DEIS appears to represent that PG&E will, in fact, follow Jepson Prairie Preserve Alternative Route C. However, the CPUC adopted the Jepson Prairie Preserve Alternative Route B rather than Alternative C (Mitigation Measure 61C; Findings of Fact 163). Either the EIS should be amended to reflect the result of the CPUC's decision, or, if the Commission does not agree with that realignment, the EIS should be revised to explain the basis for the disagreement and to provide for another acceptable alternative route.
AL3-13	2-22; 5; 15	As the DEIS is written, it would appear that this cost of $237-239 million applies to the alternative portion of the route only. Altamont believes that it is intended to include a larger segment of the PG&E route, including that variation. This should be clarified in the EIS.
AL3-14	2-22; 5 2-30; 5	The DEIS appears to represent that PG&E will, in fact, follow Brentwood Route Alternative 1 and is unclear about the Brentwood Compressor Station's location. The CPUC adopted the Brentwood Route Alternative 4, as modified by the incorporation of the Contra Costa Reroute (Mitigation Measures 30, 61b; Findings of Fact 155), and the Brentwood Compressor Station Site C (Findings of Fact 156). Either the EIS should be amended to reflect the result of the CPUC's decision, or, if the Commission does not agree with that realignment, the EIS should be revised to explain the basis for the disagreement and to provide for acceptable alternative routing for compressor station siting.
AL3-15	2-24; 4; All 2-27; Table 2-3	The DEIS' total cost estimate of $545 million for the PG&E section of the project is incorrect. This cost estimate is based on 1988 dollars. When annual escalation rates are applied for the years 1989 through 1994, the capital cost is actually $696 million. (Pacific Gas and Electric Co., Dkt. No. 90-12-119, at 168.) In addition, the DEIS's PGT and PGE cost estimates do not include all environmental mitigation costs. The final decision of the CPUC states "we find it reasonable to assume a cost cap of $40 million for the environmental costs of the Expansion Project (PG&E only). This number is well within the range of the estimates on the record. We conclude that it is reasonable to expect that mitigation measures will cost up to $40 million." (Id. at 134.) The decision further states that environmental costs should be added to the applicant's estimated construction cost cap of $544.8 million (1988 dollars). (Id. at 168.) Therefore, the final EIS needs to be revised to account for these additional costs. At least $40 million in mitigation costs for the PG&E portion should be added to the total cost of the project, plus any additional mitigation costs that will be incurred due to additional mitigation measures imposed by the Commission. Likewise, for the PGT portion, the

AL3-12	See response to Comment AL3-11.
AL3-13	See response to Comment AL3-12.
AL3-14	See response to Comment AL3-13.
AL3-15	Cost presented in Chapter 2 are estimates, as both the text and table indicate. Staff has revised this section to indicate that cost estimates are based on 1988 dollars.

	Page/Para/Line	Comment or Question		
AL3-15 (cont.)		applicant's construction cost cap estimate of $635 million (1988 dollars) does not include escalation and does not yet include all environmental mitigation costs. Escalated for the years beginning 1989 to 1994, the capital cost is $810 million. Since PGT's estimate was prepared in 1988, it clearly did not anticipate or account for the environmental mitigation conditions that will be required by the Commission. Altamont's consultants expect, based on their professional experience and published and unpublished data obtained from the USFWS, the COE, USBR and certain utilities, that at least $40 million will be needed to mitigate impacts in Oregon, Washington and Idaho (1990 dollars) if mitigation measures identified in the DEIS are imposed. As a result, the $1.18 billion total costs for the entire project should be escalated at an annual rate of five percent, at least $80 million (1990 dollars) plus escalation of 5% per year added to that total to account for environmental mitigation costs as reflected in the FEIR and the DEIS, plus additional mitigation costs that will be incurred by PGT/PG&E after the Commission finalizes the EIR.		
AL3-16	2-39; 2; All	The PGT construction spread description does not match the revised spread breakdown contained in the December 20, 1990 letter from Jack Fallin to the Secretary of the Commission.	AL3-16	See revised Chapter 2.
AL3-17	2-40; Table	This table does not sufficiently take into account Oregon Department of Fish & Wildlife (ODFW), Idaho Department of Fish & Game (IDFG), Washington Department of Ecology (WDE) and Washington Department of Wildlife (WDW) guidelines for timing of in-water work to protect fish and wildlife. For example, for the Moyie River, Idaho, the prescribed in-water work window is July 15 - September 30. Although a late August stream crossing construction window would be adequate for most streams, preferred construction timing varies with the specific fish species present and corresponding life history needs, especially spawning. Preferred construction timings for several of the PGT stream crossings, after accounting for these factors, are: Umatilla River 15 Jul-01 Dec Butter Creek 15 Jul- 31 Aug Willow Creek (Morrow Co.) 15 Jul-31 Aug Rock Creek 15 Jul-31 Aug John Day River 15 Jul-31 Aug Buck Hollow Crk 01 Aug-31 Dec Trout Creek 01 Aug-31 Dec Willow Creek (Jefferson Co.) 01 Nov-31 Mar Crooked River 01 Nov-31 Mar Pauline Creek 15 Jul-30 Sep Williamson River 15 Aug-30 Sep Lost River 01 Jul-31 Mar	AL3-17	Thank you for this information. Because Chapter 2 is a discussion of the "Proposed Project," and not a discussion of environmental impacts or mitigation, this information is not suitable for inclusion in Chapter 2.

	Page/Para/Line	Comment or Question
AL3-17 (cont.)		These dates, which are derived from ODFW's "Waterway Habitat Alteration Policies," should be specified in the EIS as well.
AL3-18	2-40; Table 2-8	The construction spread description does not match the revised spread breakdown contained in the December 20, 1990 letter from Jack Fallin to the Secretary of the Commission.
AL3-19	3A-1; 4; 5	It is stated that "active surface faults do not occur within five miles of the pipeline route." A reference or support for this statement should be provided. Also, the DEIS' operating definition for an "active" fault is unclear. It appears in later sections that an active fault is defined by displacement occurring within the Holocene Epoch (past 10,000 years). This should be clearly stated. In addition, during the seismicity discussion for the Altamont route, fault activity is discussed within a 50 mile wide corridor of the route, not 5 miles as in the PGT discussion. This should be corrected.
AL3-20	3A-5; 1; 1	It is stated that "areas susceptible to liquefaction would not be crossed by the pipeline route in Idaho." What is the significance of Miocene and Pleistocene lacustrine deposits in the area (i.e., the Latah Formation)? This information should be provided.
AL3-21	3A-9; 2; 3 3A-11; 2; 3	It is stated that twelve historic earthquakes have been felt in the area but "less than one-half appear to have been generated locally." Support for this statement should be provided. In addition, because the Wallula Gap Fault offsets Pleistocene rocks (DEIS at 4A-3; 5; 5), this is an active fault and should be clearly identified as such.
AL3-22	3A-9; 5	The Palouse loess deposits under cultivation may have potential for liquefaction where the groundwater levels are near the land surface. The EIS should reflect this concern.
AL3-23	3A-9; 7; 1	It is stated that "the Columbia Plateau province section appears to have the most significant potential for slope stability problems." Loess hills are identified as general problem areas but there is no discussion of specific sites of slope instability. The EIS should address this issue.
AL3-24	3A-10; 1; 3	The DEIS states that tributary rivers of the Columbia River have grossly unstable walls on some of their slopes but does not specify where these areas are. The EIS should include this information.
AL3-25	3A-10; 3	The loess hills of the Palouse (i.e., Steptoe Butte State Park) should be included in the EIS as a unique geologic feature. (Washington State Department of Recreation, Whitman County.)
AL3-26	3A-10; 6; 4	The DEIS states that "landsliding is common where heavy basalt flows overlie tilted, altered tuffaceous rocks of early and middle Tertiary age" in Oregon.

AL3-18 See response to Comment AL3-16.

AL3-19 Thank you for your comment. Please see revised Chapter 3A. We believe the definition of fault activity is sufficiently clear when the discussion (in Chapter 4A) of the significance criteria are taken into account. On your other issue, the purpose of the discussion of seismicity within a 50-mile-wide corridor for the pipeline is to get a regional "flavor" of geologic conditions, and its effect on the rest of the discussion is innocuous.

AL3-20 Thank you for your comment. You are correct in your evaluation of the presence of unconsolidated deposits that would be crossed by the PGT pipeline route in Idaho. Under the right seismic and water saturation conditions it is possible that such sediments would liquefy. However, our statement that areas susceptible to liquefaction would not be crossed was a reflection of our belief, based upon the previous statement in the text, as corroborated by the staff of the Idaho Geological Survey, that no major faults capable of causing strong ground shaking are located near the pipeline route in Idaho. In order to be consistent with the text pertaining to the Altamont Project, we corrected the text in the FEIS to reflect the number of miles and location of sediments that are liquefiable in Idaho. Please see corrected Chapter 3A, 4A, 6 and Table 5-2.

AL3-21 Thank you for your comment. Please see corrected Chapters 3A and 7. With respect to the level of activity of the Wallula Gap Fault, we believe that its activity is made sufficiently clear when the discussion of the significance criteria (in Chapter 4A) are taken into account.

AL3-22 Thank you for your comment. We disagree that this is an area for concern. The new PGT pipeline would cross approximately 0.65 miles of the Palouse loess soil. Of this distance, less than 1.0 linear feet would be located within the Union Flat Creek floodplain that could be subject to groundwater saturation. Please note that there are no residences within at least 0.5 miles of the PGT pipeline route in this area. We therefore stand by our analysis.

AL3-23 Thank you for your comment.

AL3-24 Thank you for your comment. Please see revised Chapter 3A.

AL3-25 Thank you for your comment.

AL3-26 Thank you for your comment. Please see corrected Chapter 3A.

	Page/Para/Line	Comment or Question		
AL3-26 (cont.)		Also, on page 3A-12, the DEIS states "the greatest potential for slope stability problems exists along canyon walls where steep slopes have developed in areas of weak, underlying sandstone." Overall, it appears that the potential for landslides along the PGT route is high. This should be clarified and the location of these problem areas identified. In addition, the landslides occurring along the John Day Canyon variation are active slides, not slides "that were active during the Holocene Epoch." We are still in the Holocene Epoch, and this by definition is an active slide. The EIS should reflect this fact.		
AL3-27	3A-11; 3; 1	It is stated that there is "no evidence of Holocene-aged activity at any surface fault within five miles of the proposed route in Oregon, except at the Northwest Rift Zone and Walker Rim System." A reference for this statement should be provided, and it should be rephrased in the EIS to clearly state that the Northwest Rift Zone and Walker Rim System are active faults.	AL3-27	Thank you for your comment. Please see corrected Chapters 3A and 7. The level of activity of these faults is appropriately discussed in Chapter 4A.
AL3-28	3A-11; 4; 9	It also is stated that the appearance of cracks along the Wallula Gap Fault "suggests they are ruptures from ground shaking rather than surface fault ruptures." How is this conclusion reached, and does it represent a significant difference? Perhaps ruptures from ground shaking are of greater consequence than those resulting from fault offset. The EIS should clarify this issue.	AL3-28	Thank you for your comment. Please see corrected Chapter 3A.
AL3-29	3A-12; 2; 4	It is stated that "the greatest potential for slope stability problems exists along the canyon walls where steep slopes have developed in areas of weak, underlying sandstone." More detail should be provided on where such areas are found along the route.	AL3-29	Thank you for your comment. Please see corrected Chapter 3A.
AL3-30	3A-12; 4	The pipeline corridor would traverse areas of the John Day Fossil Beds National Monument. These world-class fossil localities within units such as the John Day and Clarno Formations should be noted in the EIS.	AL3-30	PGT's pipeline route is located at least 15 air miles away from the boundaries of the John Day Fossil Beds National Monument.
AL3-31	3B-1; 1	There is no discussion of the soils restrictive features (i.e., Ece & SARs). The DEIS states that the "route in Idaho would not cross any prime farmland." Please provide support for this statement.	AL3-31	Thank you for your comment. A discussion of soil restrictive features appears with the definition for "rehabilitation potential" in new Appendix B-4. According to our research into the matter, the U.S. Soil Conservation Service designates prime farmlands on the basis of whether or not they are irrigated. The PGT pipeline would cross 13.1 miles of prime farmlands in Idaho. Please see corrected Chapter 3B. With regard to the Palouse, wheat production utilizes dry farming techniques. Therefore, irrespective of how prolific the Palouse is, with respect to wheat production, the land is not prime farmland.
	3B-1; 2; 5	The EIS should define rehabilitation potential for a soil. It is stated that "the route would cross 33.4 miles of prime farmland in Washington." However, the Palouse is the most productive wheat land in the country. (Soil Survey of Whitman County, Washington, SCS, USDA.) The basis for this statement should be provided.		

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AL3-32	3C-1; 2; 3	Should add after "proposed", the words "PGT portion of the".	AL3-32	Comment noted.
AL3-33	3D-3; Table 3D-2	Should state distance in "feet".	AL3-33	Comment noted.
AL3-34	3D-5; 6; 3	The DEIS points out that Bonner County's plan is being revised, to include a shoreline management plan. The EIS should also analyze whether the Idaho Department of Fish and Wildlife will require any special permits for Cocolalla Creek as a result of the revision of the Bonner County comprehensive plan, or whether, because this is a critical area, the Department will require a special mitigation plan.	AL3-34	As stated in Chapter 4D, since the crossing would occur adjacent to the existing PGT pipeline, no conflict with the management plan would be expected. PGT would be required to comply with all conditions attached to their stream crossing permit by the Idaho DEQ.
AL3-35	3E-9; 7; 2	The DEIS states, conclusorily, that "[a]gricultural fields and developed land provide limited habitat for wildlife. Most use occurs as feeding along the edge between wildlife habitat and agricultural fields." This should be revised to explain specifically what wildlife species use this habitat, as well as whether this habitat is used as hunting grounds by raptors and/or for feeding by game birds.	AL3-35	Staff believes that this statement is accurate. See revised Chapter 3E.
AL3-36	3E-12; Table 3E-3	Table 3E-3 includes not only federally-listed species, but also candidate and non-listed state species for Idaho, Washington and Oregon, while, at the same time, it restricts the California species addressed to currently listed species. The Table and accompanying text should identify all special-status species (e.g., federally-listed, and candidate and state-listed), regardless of whether they are federally-listed as threatened or endangered. The title of the Table should be changed, and *all* 47 of the California "special-status" wildlife species, identified in the FEIR at Table 3-2, should be included to ensure that the Commission accurately evaluates the full impacts of the proposed project and alternatives thereto.	AL3-36	Tables 3E-3, 4E-2, 4E-3, 4E-5, and 4E-7, and Appendix E-1 have been revised to include only Federal-listed, proposed, or candidate species, Forest Service- or Bureau of Land Management-listed sensitive species, and state-listed species. Natural Heritage Program and/or Native Plant Society-listed species have been deleted. In addition, because the Endangered Species Act only applies to Federal-listed species, only these species are identified in Table 4E-9 and the "California" portions of appendix E-1 and Table 4E-2.
AL3-37	3F-2; Table 3F-1	The genus for cutthroat trout is *Oncorhynchus* not *Salmo*. This should be corrected. Add to the "cold water game fish of Oregon:" o Redband trout/*Oncorhynchus mykiss ssp*. o Cutthroat trout/*Oncorhynchus clarki* (*See* Behnke, R.J., *Monograph of the native trouts of the genus Salmo of western North America* (U.S.D.A. Forest Service 1979) ("Behnke").)	AL3-37	Comment noted.
AL3-38	3F-3; Table 3F-2	"Redband trout/*oncorhynchus sp.*/C2/--" should read "Redband trout/*Oncorhynchus mykiss ssp.*/C2/SC." This fish was formerly *Salmo newberryi*, then *O. newberryi*, and is now a formal subspecies of *O. mykiss*. Several stocks of redband trout in the vicinity of the PGT route have been elevated to the status of Special Concern by the American Fisheries Society and are likewise considered by the state of Oregon. In	AL3-38	Comment noted.

	Page/Para/Line	Comment or Question	
AL3-38 (cont.)		addition, the genus for cutthroat trout is Oncorhynchus not Salmo. (See Behnke, supra at Comment to 3F-2, Table 3F-1; Moyle, P.B., Inland Fishes of California (U. of Cal. Press 1976); Kendall, R., "Taxonomic changes in North American trout names," Trans. Am. Fish Soc. 117(4): 321 (1988); Williams, J.E., et al, Fishes of North America, Endangered, Threatened and of Special Concern 14(6):2-20 (Am. Fish Soc'y (1989) ("Williams").) These changes should be made in the EIS.	
AL3-39	3F-4; 4; 2-4	The DEIS states that "[a]t the proposed crossing, the river provides transportation water and rearing habitat for anadromous salmonids." The information provided on fish resources is insufficient to allow evaluation of potential impacts. Additional information on the timing of fall chinook and winter steelhead passage and rearing in the vicinity of the proposed crossing should be provided, so that potential impacts of proposed in-water work may be evaluated and verified by the reader. Potential utilization and timing of warmwater fish life stages associated with specific habitats at the proposed crossing should likewise be discussed.	AL3-39 The information presented in Chapter 3F is adequate to support the evaluation of impact in Chapter 4F.
AL3-40	3F-5; 1; All	Trout Creek, referenced in the DEIS, is the subject of a major watershed rehabilitation effort sponsored by the Bonneville Power Administration (BPA). Part of this effort may involve remeandering the Trout Creek channel. Information on this project is available from BPA, Division of Fish & Wildlife, Program Planning Section (503-230-5384). Coordination with BPA should be done before the EIS is completed, to ensure any such work is accounted for in the location of the pipeline.	AL3-40 Thank you for this information. No response required.
AL3-41	3F-5; after 2;	Concerning Paulina Creek, the lower portion of the Creek is the subject of an ODFW rehabilitation plan which would reestablish the original stream channel and provide additional stream flow during the dry season. Coordination by the Commission with ODFW should be done before the EIS is completed, to ensure that the pipeline will not interfere with that agency's plans. The person to contact for information is Ted Fies, Area Fish Biologist, ODFW, at 503-388-6363.	AL3-41 See response to Comment AL3-40.
AL3-42	3F-5; 4	Add redband trout, Oncorhynchus mykiss ssp. under "Special-Status Fish. . ." (See Williams, supra at Comment to 3F-3.) Information on this subject also is available from ODFW Fish Division at 503-229-5400, ext. 359, and the Klamath Tribe (Craig Bena at 503-783-2095).	AL3-42 The cited text refers the reader back to Table 3F-2, which clearly lists this species.
AL3-43	3I-2; 6; 2	Replace "east" with "west".	AL3-43 Comment noted.
AL3-44	3M-9; 3	Identify all tribal groups that were contacted regarding Native American concerns in Idaho, those that expressed concern, and those that had no concerns, and identify all concerns expressed.	AL3-44 See revised Chapter 3M.

	Page/Para/Line	Comment or Question		
AL3-45	3M-9; 4	identify tribal groups that were contacted regarding Native American concerns in Washington, those that expressed concerns, and those that had no concerns, and identify all concerns expressed.	AL3-45	See revised Chapter 3M.
AL3-46	4A-1 to 9	The DEIS lacks sufficient detail concerning the PG&E portion of the PGT/PG&E proposal. This prevents a valid comparison from being made. For example, the DEIS does not provide information about the significant seismicity and the major active faults along the California portion of the PGT/PG&E route. Similarly, the DEIS does not say which part of the 46.2 miles of liquefaction potential along the PG&E route is "significant". These deficiencies raise the following serious questions about the PG&E portion of the PGT/PG&E proposal: How many faults offset during the Quaternary are approached within five miles in California by the PG&E route? Which faults were offset during the Holocene? Can risks at these crossings be reduced to "less-than-significant" levels by design measures? What additional design measures will be needed to ensure that the facilities will be constructed safely? (We note that the CPUC found that these risks were significant and unmitigable.) (FEIR at 2-14 to 2-15; CPUC Opinion in Pacific Gas & Electric Co., D. 90-12-119, slip op. at 144-45.) To address these questions, the text and Tables S-2 and S-3, 3A-1, 3A-2, 4A-1, and 6-1 and Fig. 3A-2 must be revised to include detailed information on the California portion of the PGT/PG&E project. In addition, the text and summary tables should be revised to indicate which geological impacts are mitigable and therefore "less-than-significant" and which of the remaining "significant" geological impacts are likely to occur during the project lifespan, for the entire length of each project.	AL3-46	Thank you for your comment. The conclusions contained in the CPUC's FEIR are incorporated by reference into our DEIS and FEIS, but only insofar as they do not contradict our conclusions. For specific information about the California part of the PGT/PG&E pipeline project, please see the CPUC's FEIR. With respect to other issues that you raise, they can all be answered by careful examination of the DEIR, FEIR, DEIS and FEIS volumes. For example, the locations of the significant faults and areas in California that are prone to liquefaction are to be found in the FEIS map volume.
AL3-47	4A-2; 4; 1	The DEIS states that "the potential for landslides to occur along most of the PGT route is low." However, on page 3A-9, the DEIS states that the loess hills of the palouse are unstable, as are "canyon walls where steep slopes have developed in weak, underlying rocks." These two statements appear to contradict each other and the EIS should reflect a consistent approach to this issue.	AL3-47	Thank you for your comment. Please see corrected Chapter 3A.
AL3-48	4A-3; 5; 1	The DEIS states that "[t]he PGT route would not cross any known active fault zones." This statement is clearly incorrect. The Wallula Gap Fault Zone, the Walker Rim Fault and the Northwest Rift Zone are all active geologic structures and should be stated as such. Impacts associated with construction across these geologic structures are significant and the EIS should acknowledge this concern. (DEIR at 3A-5, para. 9; 3A-14, para. 1; DEIS at Table 3A-1.)	AL3-48	Thank you for your comment. Please see corrected Chapter 4A.

	Page/Para/Line	Comment or Question		
AL3-49	4A-4; 1; 4	It is stated that "PGT's project lies within Seismic Risk Zones 1 and 2, and is not expected to experience significant ground shaking events." It should be noted that the majority of the PGT route (approx. 70%) lies within Seismic Risk Zone 2, which by definition are areas that will sustain "moderate damage" in the event of a quake. The EIS should reflect this fact. In addition, on page 3A-11, the DEIS discusses the appearance of "cracks" and "ruptures" resulting from ground shaking. This should be considered a significant impact and reflected as such in Section 4A of the EIS.	AL3-49	Thank you for your comment. We did not deem it necessary to repeat in our document information that was already represented in Figure 3A-2. We recognized the qualitative nature of the term "moderate damage," and therefore included Table 3A-5 in our document in order to permit the reader to draw his/her own conclusions as to the significance of the term. With respect to your reference to Page 3A-11, we have reconsidered the inclusion of the sentence containing references to "cracks" and "ruptures" and decided to delete it. Surface cracks would be of no consequence to a buried pipeline, especially if there is not apparent offset, as would be expected through fault-block movement.
AL3-50	4A-4; 2; 4	The liquefaction potential of Miocene and Pleistocene lacustrine deposits should be discussed along with that of the Palouse loess deposits. In addition, it is stated that "there is a very low likelihood of earthquake-induced strong ground shaking," thus the impact of liquefaction is less than significant. This statement is inaccurate, especially in light of the comment above, and the text on page 3A-11 which discusses "cracks" and "ruptures" in the surface resulting from ground shaking. The EIS should be revised to correct this.	AL3-50	Thank you for your comment. As explained in our response to your Comment AL3-22, the length of the potentially liquefiable area of Palanse loess is too small to warrant any discussion.
AL3-51	4A-4; 3; 1	It is stated that the "possibility of damage occurring to the proposed PGT pipeline as a result of volcanic activity is considered remote" and "that the impact due to volcanic activity is less than significant." Since the PGT route crosses extensive areas of Holocene vulcanism, with some lava flows less than 2,000 years old, we strongly disagree with this statement, and consider this to be a significant impact. The EIS should be revised to reflect this fact.	AL3-51	Thank you for your comment. However, in our carefully considered opinion, taking into account the actual distance between the nearest volcanoes and the PGT pipeline route, we judged the possibility of damage resulting from volcanic activity to be remote, as well as the possibility of volcanic activity taking place within the life of the project to be remote.
AL3-52	4B-8	The chart at the bottom of the page lists PGT as crossing 125 total miles of land with moderate or high erosion susceptibility. Altamont believes that this number is low, and is based on PGT's 25% "steep slope" definition. The Commission, in contrast, used a 15% steep slope standard for Altamont. The Commission should use the same standard to determine erosion susceptibility consistently for the two projects and adjust the EIS accordingly. Otherwise no good comparison of the two can be made.	AL3-52	Thank you for your comment. The chart you refer to is for informational purposes only. No comparison between the PGT Project and that of Altamont is intended or shown anywhere in our document.
AL3-53	4E-4; Table 4-E1	Table 4-E1 does not distinguish between temporary or permanent impacts of the PGT/PG&E pipeline on the various types of vegetation. This information should be included.	AL3-53	The column heading titles provided in Table 4E-1 clearly provide the information requested.
AL3-54	4E-12; 2; All	For its first 14 miles in Idaho, the PGT route is located almost entirely in the Moyie River Valley. Thus, the amount of wetland and riparian area crossed by the pipeline appears to have been substantially underestimated in the DEIS. The Commission should verify the wetland/riparian area crossed by the PGT pipeline and amend the figure in the EIS.	AL3-54	The staff utilized NWI maps, aerial photography, and actual site visits to determine the information presented in the referenced paragraph. The staff believes that this information is correct.

	Page/Para/Line	Comment or Question		
AL3-55	4E-14; Table 4E-2	Special-status plant species evaluations for PGT cannot be fully determined, as many species were not inventoried. (FEIR at App. C, C-20.) Therefore, the results of 1990 inventories should be included in the EIS.	AL3-55	We disagree with your comment. Please see revised Chapter 4E, which fully discusses the results of PGT's 1990 field surveys.
AL3-56	4E-26; 6; 6	The DEIS indicates that the PGT pipeline would cross through at least one forested wetland in Washington. The Washington State Department of Ecology (DOE) issues State 401 Water Quality Certifications. Although the Department will strongly recommend avoidance of all wetlands, its 401 certification (if granted) will require that the forested wetland be revegetated with native trees and shrubs. Similar requirements will likely be placed on other disturbed wetlands as well. However, the DEIS does not require such revegetation for affected wetlands in Washington. The Commission should coordinate its wetland mitigation plans with DOE to ensure the Department's requirements are taken into consideration.	AL3-56	Thank you for this information. Please see response to Comments SA11-5 and SA11-6.
AL3-57	4E-31; 4; 3, 8	The DEIS states that "[c]over for nesting habitat is limited in this region, and nesting game birds tend to concentrate in these areas." The DEIS goes on to contradict that statement by saying that substantial portions of the population would *not* be affected and that the loss of nesting habitat and affected birds is an *insignificant impact*. If the birds' nesting is concentrated there, the loss of habitat *will* be significant. This should be clarified or corrected and appropriate mitigation conditions prescribed.	AL3-57	The referenced section has been revised to delete the statement that cover for nesting habitat is limited. This revision is based on information obtained in staff's visit to the area in September 1990.
AL3-58	4E-33; 4; 4, 5	The DEIS states that "Bitterbrush-Sandberg bluegrass association on the preserve would apparently not be affected by the project." The DEIS provides no basis for this conclusion about the project's impact on this special status species plant. This should be explained in greater depth in the EIS. Similarly, the statement that "[i]t is not known to what extent these communities would be affected outside the preserve" is insufficient. Potential impacts must be determined and, if necessary, mitigation measures specified in the EIS.	AL3-58	See revised Chapter 4E. In addition, staff's recommended mitigation measure adequately addresses this concern. Please see response to Comment GI-42.
AL3-59	4E-43; 5; 1, 7	The first sentence states that this is "important" habitat. But, the last sentence states that the impacts (i.e., reduced reproductive success, direct mortality) would not be significant. This is inconsistent with the significance criteria presented on page 4E-2.	AL3-59	The last sentence of the referenced paragraph correctly applies the significance criteria to this issue, and reaches a consistent conclusion.
AL3-60	4E-43; 6; 1, 4	The first sentence states that this is "important" habitat. But, the last sentence states that the impacts (i.e., nestling mortality) would not be significant. This is inconsistent with the significance criteria presented on page 4E-2 and needs to be clarified. In addition, this paragraph omits mention of the numbers of acres that would be	AL3-60	See response to Comment AL3-59.

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AL3-60 (cont.)		disturbed which contain important waterfowl nesting habitat. This apparent error should also be corrected.	
AL3-61	4F-7; 1-4	Most of the special-status fish referenced here occur in the Klamath Basin (Sprague and Williamson Rivers, etc.). The Klamath Indian Tribe has a very active and aggressive program focused on restoration and enhancement of these species and others in the Klamath Basin, both within and outside their present reservation boundary. The Commission should closely coordinate with the Klamath Tribe, and the existence of this program should be acknowledged and taken into account in the EIS. For more information regarding fish distribution in the Klamath Basin, contact Craig Bena of the Klamath Tribe Fish & Wildlife Program at 503-783-2095.	AL3-61 Thank you for this information and for your concern.
AL3-62		In addition, redband trout is a Special Status Species which should be accounted for here in the EIS. (See Comment, supra, on p. 3F-5.)	AL3-62 See revised text.
AL3-63	4G-7; Table 4G-2; All	The method used to compute the column "Potential Land Affected" in Table 4G-3 needs further explanation, because the source of the numbers is not at all apparent from the Table.	AL3-63 The table headings were not printed correctly. "Potential Land Affected" refers to the "Most Valuable Crop". See revised Table 4G-2.
AL3-64	4G-8; Table 4G-3; All	The row labeled "Volume of Timber Sold on Public Land" does not have any units presented. This needs to be clarified.	AL3-64 Comment noted. See revised Table 4G-3.
AL3-65	4H-2; 5; 4	247 tons of NO_x emissions seems low for a 25,000 hp. gas turbine unit. This needs to be confirmed.	AL3-65 As stated in revised Chapter 4H, the emission rate of NOx from a 30,000-hp turbine would be approximately 381 tons per year based on the EPA's AP-42 emission rate of 0.0029 pound per hp-hour for a gas-turbine unit.
AL3-66	4H-5; 4; 5, 6	The DEIS provides no basis for arriving at the conclusion that there will be no significant impact to ambient air quality from PGT/PG&E's proposed facilities. Indeed, the calculations disclosed for the PG&E segment suggest that significant impacts from NO_x and PM_{10} emissions should be expected in nonattainment areas for ozone and PM_{10}.	AL3-66 As noted on Page 4H-2, compliance with the applicable air quality regulations are administered by the state air pollution control agencies, and Altamont, PGT and Kern River would also have to acquire permits to modify or to construct each of the proposed compressor facilities from the appropriate state agencies.
AL3-67	4I-2; 2; 7	Residential complaints relating to noise generated from the existing facility have been documented. These complaints emphasize the questionable use of the 55 dBA L_{dn} standard for this rural setting. Consideration should be given to the use of a more appropriate standard for this area. Additionally, noise receptors at this site have been sensitized to the noise impacts of the existing facility and will be more sensitive to the resulting increase in noise from the expanded compressor facility. This should be taken into account in the EIS and this impact determined to be significant with appropriate mitigation measures applied.	AL3-67 The EIS recommends that PGT install an improved intake silencer to reduce existing noise levels below 55 dBA. See responses to Comment GI-3.
AL3-68	4I-4; 1; 3	The use of the 35 dBA (L_{eq}) should have been identified as an L_{dn} because this noise would not be appropriately measured as instantaneous but as a sound of longer (i.e., 24 hour) duration.	AL3-68 The Ldn noise level of 35 dBA is not identified as being measured instantaneously. No response required.

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AL3-69	4L-6; Table 4L-2	John Day Canyon is evaluated as a low visual impact, but is described as moderate impact on p. 4L-5, para. 3. It should be consistently described as moderate.	Comment noted.
AL3-70	4M-3; 2; 4	"Access roads" should not be listed here, as 4J-2, para. 1, line 7, states that PGT has not provided information on the location of new access roads. The EIS should be clarified.	Comment noted. See revised Chapter 4M.
AL3-71	4M-4; 4; 1	The discussion of eligibility for listing on the NRHP is misplaced. It either should be repeated as part of the discussion for each state on page 4M-3 or incorporated into the introductory paragraph to the section. As currently situated, this discussion appears to apply only to California when, in fact, it applies to all states.	Comment noted. See revised Chapter 4M.
AL3-72	5-1; 4; 1	This statement is inconsistent with the statement on page 4G-6, para. 2, line 1 which declares the construction of the pipeline would result in both the long-term and permanent loss of commercial forest land along the right-of-way. The EIS should be changed to reflect that this loss will occur.	Comment noted. See revised Chapters 4G and 5.
AL3-73	5-1; 4; 6, 7, 8	It will take years for the forest areas impacted by PGT's route to regenerate. (DEIS at 4E-5.) Therefore, there would be "a significant cumulative impact on these resources," and the EIS should point this out.	Staff believes that the reference paragraph provides an adequate basis for our conclusion, especially given the minimal width of the additional clearing.
AL3-74	5-2; 2; 1	PG&E additional compression at Delevan and Brentwood should also be mentioned here.	See revised Chapter 5.
AL3-75	6-3; 4; All	Here the DEIS does not adequately explain the serious geological risks from the proposed PGT/PG&E project. As we explain elsewhere (see previous comments concerning 4A-1 and 4A-4, and App. B comments regarding ch. 3A and 4A), the project would cross numerous faults and large areas of seismic zones 2 and 3. There is potential volcanic activity, as well as subsidence and liquefaction-prone soils. These are significant issues with potential catastrophic consequences in the event of major earthquakes or other failures, since both the existing and proposed pipelines would be affected. As the two adjacent pipelines (i.e., 25-foot separation) would carry extremely high volumes of natural gas, rupture of any of the active or potentially active faults could result in displacement exceeding pipe ductility and resulting in the rupture of both pipelines. The consequences of pipeline ruptures constitute not only potential threats to public safety, but also serious socioeconomic and public health impacts resulting from the disruption in services to customers. Therefore, the Commission's attempt to dismiss the potentially significant geological impacts associated with the PGT/PG&E project contrasts with the conclusions of the CPUC presented in the FEIR and should be revised. The FEIR states that construction in accordance with applicable federal and state	Please see response to Comments AL3-1, -2, -19, -20, -22, -23, -24, -25, -26, -27, -28, -29, -30, and AL3-46 through AL3-51. In addition, see revised Chapter 6.

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AL3-75 (cont.)		regulations and standards "... would reduce the risk of pipeline rupture or damage to the pipeline and aboveground facilities to a level deemed acceptable by these state and federal agencies. The potential for damage from a catastrophic geologic event, such as an earthquake, would not be eliminated, however. This is therefore a potentially significant and unavoidable impact." (FEIR at 6-202.) In addition, the CPUC concluded that the presence of the pipeline in active volcanic zones constitutes "... a significant and unavoidable impact on the pipeline and associated facilities" and would also "be significant and unavoidable." (FEIR at 6-207.) The DEIS does not contain anything to show why the CPUC's analysis is incorrect. Therefore, the Commission should resolve the discrepancies identified above and decide that the geological risks posed by the PGT/PG&E project are, as the CPUC found, significant, adverse and unavoidable.	
AL3-76	6-5; Table 6-1	Table 6-1 incorrectly identifies the number of gas compressor stations in California requiring PSD review as unknown. The Delevan station in Colusa County will require review. The emissions at the expanded Delevan Compressor Station will require offsets and BACT for NO_x and will trigger a Federal PSD review. Emission projections for NO_x and CO at the Delevan compressor station are 524 and 158 tons per year respectively. The Colusa APCD is in attainment for NO_x, CO and SO_2 and nonattainment for O_3 and PM_{10}. NO_x and ROG emissions are precursors to ozone and emissions from new sources will exacerbate the Colusa APCD's nonattainment status for O_3. The California Clean Air Act (CCAA) requires the APCD to adopt more stringent NSR rules, meet the "no net increase" requirements of the CCAA, and develop an ERC Bank by July 1991. The Commission needs to address this in the EIS.	AL3-76 The applicability of PSD requirements would be determined when PG&E files an application with the appropriate state agency to acquire permits to modify or construct any expanded facilities at a compressor station. Compliance with PSD permitting process would ensure that air quality impacts are reduced to a less-than-significant level. Therefore, the information presented in Table 6-1 is correct.
AL3-77	6-6; Table 6-1	Table 6-1 fails to identify the potentially significant impacts to public safety from catastrophic geological events. The CPUC has recommended that the applicant comply with the U.S. Department of Transportation rules (49 CFR Pts. 190, 191, 192) and CPUC General Order 112-D in order to mitigate against impacts to public safety posed by active geologic faults, volcanism, soils with high liquefaction potential, and land subsidence. As we pointed out above, the PG&E portion of pipeline alone crosses at least 17 potentially active faults, 85 miles of active volcanic zones, 46.2 miles of soils with a high liquefaction potential and peat soils in the Delta which have subsided as much as 40 feet since the construction of the Delta islands. In addition, aboveground facilities at Delevan and Brentwood, both located in Seismic Zone 3, are particularly subject to damage from strong ground shaking. The text of the FEIR states that "the potential for damage from a catastrophic geological event, such as an earthquake, would not be eliminated however. This is therefore a potentially significant and unavoidable impact". Thus, compliance with applicable U.S. DOT rules (49	AL3-77 Because the FERC's EIS incorporates by reference the CPUC's FEIR, which the commentor indicates more than adequately addresses this issue, the EIS's discussion is adequate. Please refer to the CPUC's FEIR.

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AL3-77 (cont.)		CFR Pts. 190, 191, 192) and CPUC General Order 112-D fail to adequately reduce the impacts on public safety from a pipeline rupture to an insignificant level. The DEIS, thus, fails to identify this potentially significant impact to public safety. As we point out above, the final EIS needs to be revised to correct the discrepancies that exist between the DEIS, FEIR and DEIR and should clearly state that the geologic risks posed by the PGT/PG&E project present significant, adverse and unmitigable impacts. The CPUC FEIR also fails to identify pertinent API standards for high strength pipe to be followed in the design and construction of the pipeline. This also should be corrected in the EIS.		
AL3-78	6-7; 2; 3-4	The DEIS says that "the PGT route crosses 33 perennial and 110 intermittent streams." However, some of the streams indicated on the alignment sheets as being intermittent are actually perennial; some intermittent and perennial streams are omitted from the alignment sheets. These errors should be corrected.	AL3-78	Staff utilized best available information in obtaining this data. However, we are somewhat puzzled by this comment. The same sources of information were utilized to generate data for both the Altamont and PGT Projects. Nevertheless, commentor complains in Appendix A (Page A-4) of its comments that this information overestimated Altamont's number of perennial stream crossings, yet here it claims that this same information underestimated PGT's number of perennial stream crossings.
AL3-79	6-8; 2; 5	The conclusion that "construction of PGT's facilities would require the temporary clearing of approximately 23.5 acres of wetland and riparian habitat..." is erroneous, since the DEIS acreage is based on a method acknowledged to underestimate the wetland acreage potentially affected by the PGT/PG&E pipeline. Therefore, this statement should be qualified to indicate that the number of potentially affected wetland acres is questionable and has been seriously underestimated, as to PGT/PG&E. The EIR should also be revised to reflect the actual amount of wetlands that PGT/PG&E will impact after the Commission acquires the necessary data.	AL3-79	This information is correct. Please see revised Chapters 2, 3E and 4E. In addition, staff can only revise its EIS, and cannot revise the "EIR" as commentor requests.
AL3-80	6-33; 10	Mitigation measure 34 states that "PGT shall develop . . . ensure that construction activities do not interfere with anadromous fish passage." This should read ". . . passage or rearing because the activities could result in increased turbidity and suspended sediments on spawning habitat or eggs, and the avoidance of spawning and rearing a habitat.	AL3-80	The recommended mitigation measure is correct. Thank you for your comment.
AL3-81	6-37; after 2	Concerning Trout Creek, Pauline Creek and the Klamath Basin, the BPA is managing a special stream restoration program. Altamont suggests adding as a separate mitigation measure: PGT shall coordinate construction design and activities for Trout Creek and its tributaries with the Bonneville Power Administration and Oregon Department of Fish and Wildlife to ensure consistency with the Trout Creek Restoration Plan. PGT shall coordinate construction design and activities for Pauline Creek with the Oregon Department of Fish and Wildlife to ensure consistency with plans to reestablish the creek in its natural bed and to increase perennial flows. PGT shall coordinate	AL3-81	Staff disagrees. However, thank you for your opinion.

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AL3-81 (cont.)		construction design and activities in the Klamath Basin with the Klamath Tribe to ensure consistency with the Tribe's Fisheries Restoration Plan.		
AL3-82	C-1-1; Table	The DEIS fails to account for the possible presence of steelhead trout migration, spawning or rearing in the vicinity of the Willow Creek crossing. This should be verified with Jim Phelps, ODFW in Pendleton, Oregon. If Phelps confirms such presence, then the impacts of the PGT/PG&E pipeline on this species must be evaluated and mitigation measures specified.	AL3-82	Comment noted. See revised Chapters 3F, 4F and 6.
AL3-83	C-3-1; D.1.	In Oregon, there is a fill/removal permit system, administered jointly by the DSL and the Corps of Engineers. DSL will join in making the determination regarding the need for individual Section 404 and/or Section 10 permits. Therefore, the Commission should revise the EIS to require PGT to consult with these agencies.	AL3-83	Thank you for this information. No response required.

Appendix C - Comments on CPUC FEIR

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Table 2-2; 1	The FEIR assumes in Tables 2-2, 2-3, 2-5, 2-6 and 3-9 that "... high-density vernal pool areas often support about 10 percent cover by vernal pools and swales and 90 percent cover by upland communities (Jones & Stokes Associates file date)." This does not provide an accepted method for determining the actual number of vernal pool acres affected. An analysis using vegetation and topographic indicators on aerial photographs taken prior to construction of the existing pipeline, will help to define the number of acres of vernal pools that would be impacted by the proposed pipeline. The results of the delineation would provide the data necessary for the Commission to properly calculate impacts on these important resources. The revised estimate should then be presented in the EIS, along with: (1) a more accurate assessment of the project's impacts on vernal pools; (2) the acres of vernal pools that would have to be restored at a 4:1 replacement ratio (Pacific Gas & Electric Co., Dkt. No. 90-12-119, App. C at p. C-30, No. 60A, ¶ 4); and (3) the information necessary to determine the costs of mitigating these impacts (e.g., creation and restoration of vernal pools, acquisition and protection of sites supporting unprotected vernal pools, and annual monitoring of the recreated vernal pools for a minimum period of five years). The Commission should ensure, through its own independent analysis, that these issues are assessed in the EIS. The FEIR's assumption about the quantity of vernal pools is incorrect. "High density" vernal pool areas can support more than 10 percent vernal pool cover. A study conducted in East Sacramento found that high density vernal pools could support 33% vernal pool wetlands cover. ("316-Acre Parcel Project, Florin and Excelsior Roads, Sacramento County, Wetland/Riparian/Vernal Pool Survey;" Report Prepared for Carlton Homes of California, Sacramento, Ebasco Services, Inc., 1990.) These errors should be corrected in the EIS.
3-55; 7	The FEIR states that the "CPUC will specify which mitigation measures will be stipulated as part of the Certificate of Public Convenience and Necessity...." However, the FEIR and the CPUC conditions of certification do not actually state which of the proposed mitigation measures will be mandatory for PGT/PG&E (many of the "mitigation measures" are phrased

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	by use of "should" rather than "shall" or "must" or provide PG&E with mitigation options). Thus, the public cannot be certain whether impacts of this project on sensitive plant and wildlife species will be effectively mitigated. The Commission should specify as mandatory the specific mitigation provisions for the entire length of the PGT/PG&E project.
4-1; 1	The FEIR contains virtually no rationale for the siting of the reroute alignments, particularly the two longest reroutes, the Tehema and Solano County vernal pool reroutes (pp. 4-6). It appears that the reroutes were not selected through detailed constraints analyses, but rather were arbitrarily delineated on maps with the knowledge that impacts could not help but be greater than the proposed route. Nowhere is there a statement that the consultant was given the task of determining better routes than those proposed. There is no discussion of the restrictions and limitations that required the selection of the specific siting locations. The only explanation presented in the FEIR (pp. 4-2) for the location of the pipelines was based on environmental and engineering requirements defined by PGT/PG&E. Given PG&E's stated opposition to rerouting as a mitigation measure, the extent and cost of these reroutes, and PG&E's contention that rerouting is unreasonable (PG&E Concurrent Phase II Brief, pp.12, 13; CPUC Docket No. CP89-04-033), the CPUC should have conducted an independent assessment of the engineering and environmental constraints for the reroute alignment and considered more than one alignment, as it is obvious PG&E would not do so. Neither the public nor state and federal agencies were afforded the opportunity to review or comment on the adequacy of the reroute alignments selected after publication of the DEIR or the process used to select them. Furthermore, of the five reroute alternatives, two (the Shasta County and Contra Costa County reroutes) were described as "environmentally preferred" reroutes. However, these preferred reroutes are not necessarily the routes that will be selected, because the CPUC has provided PG&E with the option of selecting these reroutes or implementing reestablishment mitigation. (See Pacific Gas & Electric Co., Dkt. No. 90-12-119, App. B, Nos. 57-A & 57-B.)
4-24; 3	The FEIR does not indicate whether the U.S. Army Corps of Engineers (COE) was consulted during the reroute analysis. If not, the conclusions that the two

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	reroutes (Tehama and Solano counties) are not the environmentally preferred routes must be subjected to further scrutiny pursuant to Section 404 of the Clean Water Act permit requirements. The "Section 404 Part B Guidelines" provide that, whenever feasible, a project should be designed to avoid impacts to wetlands. Although the mitigation reroutes presented in the FEIR were an attempt to address the issue of avoidance of vernal pool habitats, the COE, through the Section 404 permitting process, will have to make the final determination on whether the reroutes presented were the most feasible, or if additional reroutes will have to be evaluated. The CPUC's failure to include an analysis of these reroutes in the DEIR precluded participation by the COE, other governmental agencies and the public in the review process. Furthermore, the mitigation measures, other than avoidance, proposed in the FEIR, as well as those included as a condition of certification, may be considered inadequate and unacceptable by the COE and may require that additional reroutes be examined. Consequently, the processing and issuance of COE permits for the PGT/PG&E project may well be delayed, leading to substantial delays in PGT/PG&E's proposed construction schedule and the likelihood of effectively avoiding construction during critical biological periods (i.e. "construction windows"). The Commission should correct these problems in the EIS. (See also our comment to page 6-9, para. 3 below.)
5-1; 5	Chapter 5 fails to identify the specific past, present, and foreseeable future projects that were considered in determining the significant impacts enumerated in Chapter 6 of the DEIR. The Commission should correct this error by identifying the projects considered when it prepares the EIS.
5-2; 2	The DEIR/FEIR fails to specify which California agency planning documents and reports were utilized to develop the regional assessments of impact trends and projections or which specific planned projects were included for the localized resource impacts. Without these documents, the accuracy of the conclusions reached in the FEIR cannot be ascertained. The Commission should correct this error by listing those documents in the EIS.
5-4; 1-4	The CPUC specifies, for the incremental loss of vernal pools, forest, woodland and other habitats, that PGT/PG&E compensate, at a 3:1 to 4:1 compensation ratio (and 1:1 for the other habitats), for impacts to vernal

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	pools that existed in the ROW before construction of the existing pipeline. Mitigation Measure 221, included in Appendix C of the FEIR (pp. C-72), requires vernal pool restoration at a 4:1 compensation ratio. As an example, the incremental loss of 100 to 300 acres of vernal pools, at a minimum 4:1 compensation ratio cost estimate range of $5,000 to $25,000/acre, would result in costs ranging from $2 to $30 million, not including the funding necessary to compensate for the loss of the other habitats or to provide long-term permanent management and protection of these areas. Since these mitigation measures were not discussed or included in the DEIR, these potentially substantial costs apparently were not included as part of the $40 million environmental cost "cap" determined by the CPUC during evidentiary hearings. Without this information, the cost and, hence, the feasibility of the PGT/PG&E project cannot be assessed. As a result of this omission, the actual amount of mitigation costs for PGT/PG&E will be significantly higher than the $40 million CPUC cap. This will be especially true after correct vernal pool wetlands delineation is performed (for the reasons stated in our comments to Table 2-2 and pages 3-9 and 4-1 above), which should show that significantly larger areas of wetlands would be affected and consequently greater mitigation efforts required of PGT/PG&E. The Commission needs to correct for all of these deficiencies from the FEIR in writing the EIS.
5-4; 2	The DEIR/FEIR fails to identify a trustee, such as the Nature Conservancy, or quantify the requisite monetary contribution to a protection fund, despite the estimates of loss of vernal pool habitat that were developed in the DEIR/FEIR. Without these measures spelled out, the requirement will be meaningless. This should be corrected in the EIS.
5-4; 3,4	The DEIR/FEIR failed to identify a trustee or quantify the monetary contribution to a protection fund, despite the estimates of loss of forest, woodland, and sagebrush-steppe habitats that were shown in the DEIR/FEIR. As noted above, without this, the measure is meaningless. This error should be addressed in the EIS.
5-4; 5	The FEIR fails to define the time-frame of reference for establishing incremental loss of cultural and paleontological resources along the existing ROW. The FEIR is also unclear as to who is to contribute in the "cost-sharing" for proposed record searches and

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	surveys. Since no surveys were conducted in advance of construction of the existing pipeline, it will be difficult to establish pre-pipeline conditions. Finally, the FEIR fails to specify the intended timing of this mitigation measure. Will it be implemented concurrent with mitigation measures or the construction of the expansion project? All of these factors should be addressed by the Commission in the final EIS.
6-9; 3	**Comment Response 2. Vegetation (General).** The inadequacy of the DEIR related to the presentation of waterway crossing and wetland-related impacts might have been avoided had the CPUC chosen to consult with and secure the input of the COE. Furthermore, the COE comment points out the absence of any appreciable consultation on the part of the CPUC with other governmental agencies during the course of the preparation of the DEIR and the resultant failure of the document to adequately address many of the potential impacts of the project or the measures required by these agencies to effectively mitigate these impacts to less-than-significant levels. (*See also* Altamont's Comments to p. 4-24, para. 3 above.)
6-13; 6-10	**Comment Response 5, Transportation.** There is no discussion of the method, timing, and duration of the PGT/PG&E pipeline construction across the Sacramento River below Red Bluff, and in the Delta, the San Joaquin River, other Delta waterways, and the Sacramento Deep Water Ship Channel. Nor are the potential impacts to be encountered during and as a result of the construction activity discussed. This is particularly important due to the fact that each of these are commercially navigable waterways. CPUC's response does not discuss potential shipping disruptions and safety risks that construction, maintenance, or emergency operations of the pipeline across these navigable waterways could entail in terms of ships involved, extent of containment of shipping operations, anchorage provisions, threat of ship accident or spills or related impacts. These potential impacts need to be described and evaluated in the EIS, and, if necessary, mitigation measures provided.
6-22; 3-6	**Comment Response 3, Project Description (General) and Transportation, p. 4J-4.** The Transportation Plan to accommodate pipeline construction on USFS lands in California should also include a forecast of frequency of road use by vehicle type, road signage criteria, and emergency procedures. The EIS should address these matters.

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6-57; 8

Comment Response 8 (General). The California Department of Fish and Game (DFG) commenting on the adequacy of the DEIR stated "...that the information provided in the DEIR is inadequate in that it fails to describe specific impacts to fish and wildlife and associated habitat and associated mitigation measures to offset impacts to less than significant levels." The DFG presented the following conclusion:

Based upon the inadequacy of the environmental documents and the failure of the project to recommend specific mitigation measures, the existing DEIR should either: (1) be withdrawn and reissued with the above referenced specific mitigation measures included or (2) a supplemental DEIR should be prepared and circulated for public review which includes specific mitigation measures.

The CPUC response stated that "...extensive consultations with DFG have been underway since the Notice of Preparation was issued". The CPUC response concludes with the assurance that:

> "CPUC recognizes the concerns of DFG and will continue to coordinate with DFG to address those concerns. Based on that coordination and an assessment by CPUC of whether findings of new significant environmental impacts have been added to the document, CPUC will determine whether it is appropriate to issue a final EIR or recirculate the draft EIR."

Obviously, the CPUC decided not to recirculate the DEIR, but rather to issue an FEIR that provides some additional information, including an updated version of the DEIR's wildlife and vegetation section.

Unfortunately, this additional information fails to address the inadequacies of the DEIR, including a description of specific impacts to wetland and riparian habitat, fisheries, and wildlife and the mitigation measures required to offset these impacts to less-than-significant levels. The Commission must address and, if necessary, correct these inadequacies in the EIS.

6-94; 5

Comment Response 5. The response indicates that the CPUC will instruct PGT/PG&E to protect existing wells against impacts from blasting. However, mitigation Measures 22 and 91 (Appendix C (pp. C-12 and C-48)) ignore the potential impacts of blasting on building foundations, water and sewer pipelines, septic tanks and leach fields, natural springs, and the existing 30

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	year-old gas pipeline. Given that 124 residences are within 50 feet of the proposed pipeline, the CPUC failed to adequately ensure that buildings and associated facilities, as well as the existing pipeline, in such close proximity to the new pipeline will clearly be protected from construction-related blasting. The Commission should independently analyze these matters in the EIS.
6-188; 9	**Comment Response 50, Land Use, p. 4D-9.** The comment dealt with the need for PG&E to comply with local land use regulations. The response in the FEIR indicates that the pipeline would be outside existing utility corridors for 14 miles and 20.8 miles in Solano County and Contra Costa County, respectively. These routes would be inconsistent with county plans and policies. (See FEIR at 6-189.) In an urbanizing area like Contra Costa County, this represents a serious conflict with existing and proposed land uses. The FEIR raises, but fails to resolve these significant land use conflicts. The Commission should specifically consider if these significant land use impacts can be mitigated to a less than significant level.
6-192; 5	**Comment Response 57, Land Use, p. 4D-2.** The response fails to explain how or why the one percent significance criterion was selected. The DEIR based the one percent criterion merely upon "professional judgment," but failed to provide support or further explanation in the FEIR. The Commission needs to specifically consider this matter and specifically provide a rationale for the criterion selected.
6-192; 6	**Comment Response 58, Land Use, p. 4D-8.** The comment addressed the question of different estimates for the amount of prime farmland expected to be permanently removed from production and conflicting information as to the significance of the impacts. Approximately 166 miles of the proposed route would cross and adversely affect prime farmland. (DEIR at 4D-8.) The DEIR indicates that 330 acres of orchards and vineyards would be removed from production, but that the impact is less than significant because less than one percent of the county's prime farmland would be removed. (DEIR at 4E-7.) Therefore, the CPUC specified no mitigation measures. The CPUC response attempts to clarify some of the information about the amount of land that is removed. However, this response still relies upon the one percent significance criterion, which we point out above is not adequately supported or justified. To the contrary, the removal from production of so much land would have a significant land use impact within the

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	county and state; therefore, adequate mitigation measures should be identified by the Commission in the EIS.
6-197; 7	Comment Response A-27. Wildlife, p. 3E-11. The comment indicated that the DEIR lacked a discussion of the fauna associated with wetlands and riparian habitats along the proposed route. The response refers the commenter to page 3E-11 of the DEIR (the page referenced in the comment) where the following description is provided: "Wet meadows, vernal pools, ephemerally wet swales, and herbaceous riparian wetlands may provide habitat for most amphibians, waterfowl, and shorebirds." This does not constitute an adequate discussion of specific fauna which may be affected by the pipeline.
	A specific listing of the types of wildlife species associated with these habitats would at least identify those species that may be displaced or injured by the project. Furthermore, knowledge of the existing wildlife using these habitats would not only identify resident species with restricted ranges that are unlikely to become re-established and may be permanently lost, but also help to ensure that biodiversity, and wetland function are each maintained during the restoration and/or re-creation of these wetlands. The Commission should provide this information in the EIS.
6-197; 9	Comment Response A-29. Wildlife, p. 3E-28. The comment indicated that the DEIR failed to address potential impacts on waterfowl using agricultural lands crossed by the pipeline. The response indicated this issue was not addressed, because construction activities in these agricultural areas would be limited to the period between April and October, when peak wintering waterfowl populations would not be present.
	This response fails to account for the fact that a final construction schedule has not been completed and the inevitable likelihood of construction delays. Therefore, there are no assurances that construction throughout vast agricultural areas of the Central Valley would be limited to the proposed construction window. Consequently, a discussion and even a simple tabulation, of the principal waterfowl wintering areas on agricultural lands should have been included to adequately complete the description of the potentially affected environment. Further, these species and the effect that PG&E's construction activities might have, if not in the "window," should have been analyzed, and

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	an express prohibition on "non-window" construction specified as a mitigation measure. The Commission should address and, if necessary, correct these omissions in writing the EIS.
6-197; 11	**Comment Response A-30. Wildlife, p. 3E-31.** The comment requested an explanation for the omission of a number of threatened and endangered species, including the salt marsh harvest mouse and Aleutian Canada goose. The response indicated that (1) the pipeline would not cross any occupied habitat of the salt marsh harvest mouse, but failed to cite a source for this determination; and (2) "(F)ew Aleutian Canada geese would be in the Central Valley when construction occurred..." and "...the pipeline would not cross known habitat". However, since potential impacts to wintering waterfowl on agricultural lands were summarily dismissed by the CPUC (see Comment Response A-29, above), the FEIR does not show adequately that the potential impacts on these species, in fact, were considered. The Commission needs to independently determine in the EIS whether these species would be affected by the proposed project and should consider the possibility of timing construction so as to avoid any possible interference with these species.
6-198; 10	**Comment Response A-35. Fisheries, p. 3F-8.** The comment requested a reason for the absence of discussions of the presence and potential impacts to fall and late fall-run chinook salmon in the DEIR. The response indicated that potential impacts on all four races of chinook salmon were discussed under the heading of "Anadromous Fish - Sacramento River" (DEIR, p. 4F-6). However, the DEIR provided only a discussion of generic impacts and mitigation measures that apply primarily to winter and fall-run Chinook salmon and other anadromous fish populations whose life stages (i.e., adult migration, spawning, incubation, rearing, smolt migration etc.) would be least affected by construction between the period from July 15 through September 15, the proposed PGT/PG&E construction window. This does not adequately respond to the question posed by the comment, because fall and late-fall run species critical life cycles may well coincide with this "window." The Commission should carefully examine this problem and assure independently that the proposed construction windows adequately protect these fisheries.

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6-202; 4	Comment Response A-65. Geology, p. 4A-2. This comment dealt with fault crossings and questioned whether the use of a 5 mile distance to an active fault was not arbitrary. The response, which indicated it was a conservative approach, raises several additional questions. What special design features will be implemented to mitigate the damage where the pipeline crosses an active or potentially active fault? Will these special design features be followed where the pipeline is within 5 miles of an active or potentially active fault? What length of the pipeline falls into this category? The Commission should specifically review these issues and address them in the EIS.
6-202; 4,5,6	Comment Response A-65, A-66, A-67, Geology, p. 4A-2. These responses generally require PGT/PG&E to follow seismic design criteria put forth by U.S. Department of Transportation (DOT) regulations, CPUC General Order No. 112-D, and ANSI standards. However, the response further indicates that even implementing these design criteria will not eliminate the potential for pipeline damage from a catastrophic earthquake. According to the FEIR, the PG&E portion of the pipeline will cross 17 potentially active faults, 85 miles of potential volcanic activity, 9.25 miles of soils with a high liquefaction potential, and peat soils in the California Delta which have subsided as much as 40 feet since construction of the Delta Islands. (See Altamont's comments in App. B which point out discrepancies between the DEIS and the FEIR/DEIR on these calculations, which need to be resolved by the Commission.) Given these large expanses of highly risk-prone areas, the CPUC's conclusion should be carefully weighed by the Commission, especially because the CPUC admittedly found that the PG&E project would pose significant risks that had not been mitigated. Routing a new pipeline that has significant safety problems adjacent to an existing pipeline creates a significant risk. If the risk of seismic damage cannot be effectively eliminated, then a single seismic event could completely disrupt the supply of gas from both pipelines. A greater level of reliability would be achieved by selecting a different route for a new pipeline at locations which do not provide significant seismic risks, i.e., one that would not be affected by the same risk-prone areas which could impact the existing pipeline. The second issue concerns the seismic design standards of the compressor stations. Aboveground facilities at

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	Delevan and Brentwood are particularly subject to damage from strong ground shaking, because they are both located in Seismic Zone 3. The compressor station equipment should be analyzed and/or tested to demonstrate reliable and safe performance during and after severe earthquakes. The CPUC did not show that this has been done and also stated no criteria to show acceptability of specific equipment design on this point. Furthermore, the FEIR fails to indicate whether the instrumentation and control systems can be seismically designed.
	The Commission should carefully consider each of these issues and, in the EIS, correct the errors in the CPUC's approach, as indicated above.
6-205; 1	Comment Response A-73. Geology, p. 4A-8. The response to this comment refers back to the response to comment A-67 for a discussion of a plan to mitigate liquefaction concerns. However, the response to A-67 simply invokes generic design standards and does not deal specifically with mitigation of soils liquefaction potential. Thus, the CPUC's analysis was insufficient, and the Commission needs to independently analyze and resolve these remaining problems in the EIS: (1) What lengths of the proposed pipeline cross areas of potentially liquefiable soils; and (2) What design features will be implemented to mitigate the liquefaction hazard?
6-210; 3	Comment Response A-93, Hydrology and Water Quality, p. 4C-13. The generic approach to stream water quality impact analysis in the DEIR is illustrated by the contention presented in this response. Despite highlighting the Fall and Pit Rivers under the "existing conditions" section (only four California rivers were specifically discussed), no specific mention of pipeline construction impacts to these two rivers is made in the impacts section. The response to comment A-93 contends that the generic water quality analysis is adequate to conclude that water quality impacts would be less than significant. That is erroneous, because it fails to establish specifically how the rivers and streams to be crossed by the pipeline in California will, in fact, be protected. The Commission needs to correct for these errors in the EIS as well.
6-220; 7 6-221; 1,2,3 6-222; 2	Comment Response A-173, Air Quality, p. 4H-3. The response to the comments describe the analyses of dust and PM$_{10}$ contained in the DEIR. Mitigation Measure 85 (Appendix C, pp. C-47) instructs the applicant to

Page/Para/Line	Comment or Question
	submit a dust control plan to each APCD in the San Joaquin Valley. However, the DEIR (at 3H-13) indicates that each of the four air basins and 15 counties traversed by the PG&E pipeline in California are already nonattainment for PM_{10}. Thus, construction and maintenance activities associated with the pipeline will exacerbate the existing unacceptable levels of PM_{10} in these 15 counties. The FEIR fails to require the applicant to submit a site-specific dust control plan to each APCD (in addition to the San Joaquin Valley) through which the pipeline passes. The Commission should thus require in the EIS that PGT/PG&E submit to and obtain approval of fugitive dust control plans by each APCD prior to construction.
6-221; 6	**Comment Response A-177, Air Quality, p. 4B-12.** The response to the comment fails to identify both why a wind speed of 2.5 m/s, rather than 1.0 m/s, was used for the air quality models VALLEY and ISCST, to estimate the maximum air quality impacts, and why a 250 meter grid was used, instead of a 100 meter grid. The California Air Resources Board (CARB) and Bay Area Air Quality Management District (BAAQMD) recommend using the 2.5 m/s and 100 meter grid and spacing parameters. Considering the air quality impacts at Delevan from NO_x, and the indirect effect of NO_x and reactive organic gas (ROGs) on ozone (O_3) levels, these modeling questions must be addressed by the Commission in the EIS.

APPENDIX D

AN ENVIRONMENTAL COMPARISON SHOWS THAT THE ALTAMONT PROJECT IS VASTLY SUPERIOR TO THE PGT/PG&E PROJECT.

Since the Commission did not make the necessary analytical comparison of the two projects, Altamont has developed its own systematic comparison of the environmental impacts of each project. This comparison makes it evident that Altamont's project, in conjunction with the additions that would be needed to the Kern River facilities to accommodate gas transportation on the Altamont pipeline, will have much less impact on the environment than would the PGT/PG&E alternative. More specifically, this comparison shows that Altamont's project would be clearly environmentally superior in nine categories. In three other categories, the results are mixed or uncertain and, in one, neither project would have a significant impact.[1] Moreover, if, to the extent possible by Altamont, the questionable data and errors discussed in the preceding portion of our Comments and Appendices are corrected, the Altamont project is superior in virtually every category.

The results of the comparison of quantifiable impacts are presented in tabular form in Table I to Altamont's Comments and all significant environmental impacts are discussed and compared in narrative form below. The numbers found in Table I and in this text are largely derived from Tables S-2, S-3, 6-1 and 6-2 of the DEIS, as well as from the CPUC DEIR/FEIR. Modifications, however, have been made in the comparison to account for the errors in the DEIS, as well as in the DEIR/FEIR which are pointed out earlier in our comments.

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[1] The DEIS concludes that neither of the projects would have a significant impact in the study areas of socioeconomics, transportation or public safety. DEIS at Tables S-2, S-3, 6-1 and 6-2. Because Altamont believes this conclusion is in error as to at least socioeconomics and public safety, the two projects are compared below regarding those two categories. Transportation, however, is not analyzed in this comparison.

A. Geology

The three geological phenomena that the Commission quantified were faulting, liquefaction and landslides. DEIS at Tables S-2, S-3, 6-1 and 6-2. With regard to faulting, the DEIS indicates PGT/PG&E's proposed pipeline would croas five (5) active faults and Altamont's pipeline would cross none.[2] DEIS at Tables S-2, S-3, 6-1 and 6-2. A review of the DEIS and FEIR shows that the Commission underestimated the number of faults that the PGT/PG&E project would cross. According to the CPUC, the PG&E project would cross a total of 17 potentially active faults. In conjunction with three for PGT, this means the pipeline would cross a total of 20. FEIR at Table 2-5, DEIS at Tables S-2 and 6-1. However, even without including the faults that the DEIS omits, the PGT/PG&E proposal carries with it significantly higher seismic risks, e.g., by a ratio of five-to-one.

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[2] The Altamont route would cross two faults that may have been active in Quaternary age, but neither ia believed to be presently active. DEIS at Tables S-3 and 6-2.

Another geological difference that favors the Altamont project is the fact that the PG&E portion of PGT/PG&E's pipeline would transport natural gas through 404 miles of land in Seismic Risk Zone 3, while Altamont's pipeline would not go through any Zone 3 areas. FEIR at Tables 2-5 and 2-6. Likewise, Altamont's pipeline is not near areas of active volcanic activity, while at least 85 miles of PGT/PG&E's pipeline would cross areas of potential volcanic activity. FEIR at Table 2-5. Similarly, PGT/PG&E's project would cover a much larger number of miles of land subject to potential liquefaction. PGT/PG&E's project would cross 50.6 miles potentially subject to liquefaction and Altamont's project would cross only 7.8 such miles. DEIS at Tables S-2, S-3, 6-1 and 6-2. Finally, the PGT/PG&E project would cross at least 15.7 miles (and, according to the FEIR, 21.5 miles) of land where the potential for landslides is high, as opposed to only 3.2 miles for Altamont. DEIS at Tables S-2, S-3, 6-1 and 6-2; FEIR at Table 2-5.

Thus, in every geological area of concern, the PGT/PG&E proposed project would have a far greater potential impact than would the Altamont project, even after accounting for "mitigation" conditions. Indeed, the CPUC concluded that, even with mitigation measures, the risks posed by possible pipeline ruptures in California due to seismic and volcanic activity were significant and unmitigable.[3]

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[3] See Pacific Gas and Electric Co., D.90-12-119, slip op. at 145, 153.

B. Soils

As was true regarding geological phenomena, the Altamont project would have a significantly smaller potential impact than would the PGT/PG&E project. The most dramatic difference lies in the number of miles of prime farmland that would be crossed. The PGT/PG&E project would cross 291.7 miles of prime farmland, in contrast to 8 miles of potentially prime farmland traversed by Altamont. DEIS at Tables S-2, S-3, 6-1 and 6-2. As the CPUC concluded, even with mitigation measures, the impact on prime farmland in California would be significant and unmitigable.[4]

The difference in the number of miles of soil with "poor to poor-to-fair" rehabilitation potential is also quite substantial. PGT/PG&E would cross 312.8 miles of such soil, compared to 252 miles for Altamont. DEIS at Tables S-2, S-3, 6-1 and 6-2. This difference is even more significant when one takes into consideration the fact that the PGT/PG&E figure is based on areas with slopes in excess of 25%, while the Altamont figure used a 15% factor. If the 15% factor were used for the PGT/PG&E project, the miles of poor or poor-to-fair rehabilitation soil for that project would be much higher. Thus, in all respects involving soils, the Altamont project is environmentally superior to PGT/PG&E's.

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[4] See Pacific Gas and Electric Co., D.90-12-119, slip. op. at 145.

C. Water Quality

The quantifiable impacts on water quality by the PGT/PG&E project also would far exceed those associated with Altamont's project. The PGT/PG&E project would involve 17 major river crossings, in contrast to 9 river crossings by Altamont. DEIS at S-2, S-3, 6-1 and 6-2. The PGT/PG&E project also would require 70 crossings of perennial streams and 205 crossings of intermittent streams, as opposed to 61 and 127 for Altamont.[5] DEIS at Tables S-2, S-3, 6-1 and 6-2. Thus, the potential impacts on water quality associated with Altamont's proposed pipeline route are substantially less than those associated with PGT/PG&E's pipeline.

D. Land Use

The potential impacts that the PGT/PG&E project would have on land used for residential purposes and for growing crops also are significantly greater than the impact that the Altamont project would have. The PGT/PG&E construction right-of-way would be within 50 feet of 124 residential structures. In contrast, Altamont's right-of-way and construction would not be built within 50 feet of any residences. DEIS at Tables S-2, S-3, 6-1 and 6-2. PGT/PG&E would disturb 4,212.6 acres of cropland in contrast to 2,495 acres that would be temporarily disturbed by the Altamont project. DEIS at Tables S-2, S-3, 6-1 and 6-2.[6]

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[5] On November 28, 1990, Altamont filed route realignments that reduced the number of crossings of perennial streams by one (Stambaugh Creek).

The Altamont pipeline would run through a larger amount of publicly owned land. Altamont would cross 206 miles of federal land and 60 miles of state and local land. In contrast, PGT/PG&E would cross 141.8 miles of federal land and 10.8 miles of state or locally owned land. DEIS at Tables S-2, S-3, 6-1 and 6-2. However, this distinction does not have any significance from an environmental perspective.

Finally, while Altamont's pipeline route, as it has been realigned, would not result in any significant land use/policy regulatory conflicts,[7] the Brentwood Compressor Station and 20 miles of the pipeline for the PG&E portion would present such a conflict with the Contra Costa County land use plan.[8] Altamont's project, therefore, is superior in terms of its potential impact on land use.

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[6] The figure used for Altamont in the DEIS was modified here to exclude 1814.9 acres which were, as explained elsewhere in Altamont's comments, erroneously included in the DEIS. *See* App. A, comment on p. S-19.

[7] DEIS at 6-37 n.3 (eliminating the sole conflict referred to in Tables S-3 and 6-2).

[8] *See* *Pacific Gas Electric Co.*, D.90-12-119, slip op. at 152.

E. Vegetation and Wildlife

PGT/PG&E's route would have substantially greater impacts on vegetation and wildlife than the route proposed by Altamont. PGT/PG&E's project would disturb 2,631 acres of forest in contrast to Altamont's project, which would disturb only 30.8 acres of forest. DEIS at S-2, S-3, 6-1 and 6-2. This is a particularly significant impact in view of the number of years it will take these forests to grow back. DEIS at 4E-5.

PGT/PG&E's route would potentially affect 8 federally listed or proposed threatened or endangered species of plants and 14 such species of wildlife, while Altamont's route would disturb no federally listed or proposed plants and only possibly impact on 9 species of wildlife. DEIS at Tables S-2, S-3, 6-1 and 6-2. Equally disparate are impacts on big game habitat (PGT/PG&E - 150 acres; Altamont - 10 acres), upland game bird habitat (PGT/PG&E -94.5 acres; Altamont - 10 acres), and waterfowl habitat (PGT/PG&E - 67 acres; Altamont - 0 acres).[9] DEIS at Tables S-2, S-3, 6-1 and 6-2.

The final quantifiable area involving vegetation and wildlife identified by the Commission involves acres of wetland and riparian habitat crossed by the pipelines. As presently computed in the DEIS, PGT/PG&E's project would affect 47.2 acres and Altamont's 255 acres. DEIS at Tables S-2, S-3, 6-1 and 6-2. As discussed elsewhere in Altamont's comments, however, vernal pools were excluded from the DEIS's computation of PGT/PG&E's acreage, and deflation basins were improperly included in Altamont's acreage. See App. A, comment on p. 4E-60; App. B, comment on p. S-13. Moreover, the relative amounts of wetlands to be transversed by the two projects were derived by two very different methods which, as even the DEIS acknowledges, resulted in an overstatement of Altamont's acreage and understatement of PGT/PG&E's acreage. DEIS at 3E-2, 4E-5. Thus, the wetland acreages described in the DEIS are inadequate to allow any sort of rational quantitative comparison of the effects that the two projects would have on wetlands and riparian habitat. Setting aside the inaccurate numbers for wetlands and riparian habitat, however, one can only conclude that Altamont's project is far more environmentally benign with regard to impacts on vegetation and wildlife than is the PGT/PG&E project.

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[9] The 10 acres attributed to Altamont regarding big game habitat and regarding upland game bird habitat, are solely in reference to the Kern River Compressor Station No. 2 in Morgan County, Utah. See DEIS at Tables S-3 and 6-2.

F. Fish Species

The PGT/PG&E proposed pipeline would impact a far larger number of fish species and their habitats than would Altamont's proposed pipeline. PGT/PG&E would potentially affect 7 federally listed or proposed threatened or endangered fish species, as opposed to 1 species potentially affected by Altamont. DEIS at Tables S-2, S-3, 6-1 and 6-2. As the CPUC noted, even with mitigation measures, the impact of the PG&E portion of the pipeline on 4 of these species would be significant and unmitigable.[10]

PGT/PG&E's pipeline also would cross 18 streams with anadromous fisheries, 23 important spawning streams and 24 streams with important recreational fisheries. In contrast, Altamont's pipeline would not cross any anadromous fisheries. In addition, Altamont's pipeline would only cross 8 important spawning streams and 14 streams with important recreational fisheries. DEIS at Tables S-2, S-3, 6-1-and 6-2. Thus, the Altamont project's impacts on fisheries also would be far less than those posed by the PGT/PG&E project.

G. Socioeconomics

The DEIS concludes that neither project would have a significant impact on socioeconomics. DEIS at Tables S-2, S-3, 6-1 and 6-2. The DEIS, however, ignores the finding of the CPUC that there would be significant and unmitigable socioeconomic impacts that would result if PG&E pipeline ruptures were to occur as a result of seismic or volcanic activity in California.[11] Thus, Altamont's pipeline is clearly preferable in the socioeconomic category.

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[10] See Pacific Gas and Electric Co., D.90-12-119, slip op. at 145.

H. Air Quality

Air quality is one of the few areas where the potential impacts quantitatively may be less for PGT/PG&E than for Altamont, as currently described in the DEIS. The Altamont and Kern River Expansion project collectively would require construction of 11 new compressor stations, while PGT/PG&E would construct 1 additional compressor station. DEIS at Tables S-2, S-3, 6-1 and 6-2. PGT/PG&E, however, would be forced to expand 4 existing compressor stations to enhance capacity and Altamont would be required to do this for only 2 stations, both of which would be part of the Kern River facility. DEIS at Tables S-2, S-3, 6-1 and 6-2. Seven of the Altamont and at least 3 of the PGT/PG&E compressor stations would apparently require PSD review. DEIS at Tables S-2, S-3, 6-1 and 6-2.[12]

However, this numerical comparison may be misleading with respect to the potential air quality impacts of the proposed compressors for the PGT/PG&E pipeline project, because the DEIS uses materially inconsistent estimates of emissions from the 3 proposed PGT/PG&E compressors in assessing whether the emissions result in a significant environmental impact. With respect to Compressor Station No. 3, the DEIS states that the new 25,000 hp gas turbine will emit only 247 tons per year of NO_x.[13] This emissions estimate is approximately 40% lower than the NO_x emissions estimates for the other presumably identical 25,000 hp compressors to be installed at PGT/PG&E Compressor Station Nos. 5 and 7.[14] To provide a meaningful air quality comparative analysis, the DEIS should use comparable emission factors for all PGT/PG&E gas turbines, especially since PGT/PG&E has not yet identified the actual turbine design.

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[11] See Pacific Gas and Electric Co., D.90-12-119, slip op. at 145.

[12] According to Tables S-2 and 6-1 of the DEIS, the number of PG&E stations requiring this review is unknown. Consequently, the 3 PGT stations for which review would be needed may not be all that would require review for the entire PGT/PG&E project. DEIS at Tables S-2 and 6-1.

This emission factor discrepancy is even more significant in that air quality modeling conducted by PGT/PG&E for the area surrounding Compressor Station No. 3, using the lower 247 tons per year No_x emissions estimate, indicates that there is, nonetheless, a potential significant environmental impact for which the DEIS must provide mitigation measures. The DEIS, on page 4H-5, discusses air quality modeling conducted by PGT/PG&E using the Valley and ISCST air dispersion models to determine whether Class I and Class II Prevention of Significant Deterioration (PSD) increments for NO_x are exceeded. The DEIS, virtually without comment, noted that results from the Valley air quality model, using the 247 tons per year NO_x emissions estimate, indicated an exceedance of the Class II maximum NO_x increment (25 ug/m^3) at Compressor Station No. 3. The NO_x increment exceedance constitutes a significant environmental impact, for which the DEIS must provide mitigation measures under NEPA.[15] Significantly, none of the Altamont/Kern River Stations would result in NO_x increment exceedance.

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[13] Compressor Station No. 3 is located at Eastport, Idaho.

[14] Compressor Station No. 5 is located in Athol, Idaho, and Compressor Station No. 7 is located in Walla Walla County, Washington.

Finally, as the CPUC found, even with mitigation measures, the PG&E portion of the pipeline would result in significant and unmitigable air quality impacts due to carbon monoxide emissions in the South Coast Air Basin.[16] In addition, the PGT/PG&E proposal will result in substantial emissions of particulate matter (FEIR at 2-12), much of which will be in nonattainment areas in california, while the Altamont project passes through only attainment areas for this pollutant. Thus, construction activity in building the PGT/PG&E pipeline will also add fugitive dust emissions to the already polluted air of the California non-attainment areas.

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[15] The DEIR prepared for the California Public Utilities Commission, which discussed the same PGT/PG&E air quality modeling results, also concluded that the emissions from Compressor Station No. 3 would result in "significant long-term NO_x impacts because air quality modeling shows potential exceedances of the NO_x increment." DEIR at 4-14.

[16] See Pacific Gas and Electric Co., D.90-12-119, slip op. at 145.

I. Noise

Altamont will not have any compressor stations that potentially exceed 55 dBA. PGT, on the other hand, will have one station in excess of that level. In addition, the numbers associated with the PG&E portion of the pipeline are unknown. DEIS at Tables S-2, S-3, 6-1 and 6-2. Even without this information, however, it is clear that Altamont's pipeline will have less impact on noise sensitive receptors than would the PGT/PG&E proposed pipeline.

J. Public Safety

The DEIS erroneously suggests that neither project would have a significant impact on public safety. The DEIS is in error with respect to the PG&E portion of the PGT/PG&E pipeline route. The CPUC explicitly found that significant public health and safety risks would be faced in California because of the above-referenced possibility of pipeline ruptures caused by seismic and volcanic activity.[17] Thus, Altamont's proposed route is clearly preferable with respect to the potential impact on public safety.

K. Cultural Resources and Paleontology

The impacts posed in these areas by the PGT/PG&E project far outweigh those presented by the Altamont proposal.

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[17] See Pacific Gas and Electric Co., D.90-12-119, slip op. at 145.

First, the PGT/PG&E proposed routes would place 220 known archeological sites within the area of potential effect ("APE"), whereas the Altamont APE would only encompass 193 sites. DEIS at Tables S-2, S-3, 6-1 and 6-2. Second, the Altamont route would traverse 241 miles with significant paleontologic formations, while the PGT/PG&E route would cross 540 miles. DEIS at Tables S-2, S-3, 6-1 and 6-2.

L. Visual Impact

The DEIS finds that Altamont's proposed route would cover a greater number of miles of high or moderate impact visual resources (97.2 miles) than would PGT/PG&E's route (60.6 miles). DEIS at Tables S-2, S-3, 6-1 and 6-2. This is an error because the DEIS does not include in the PGT/PG&E figure, any mileage for PG&E even though the FEIR concluded that the PG&E pipeline would cross 181.73 miles of high or moderate impact visual resources. FEIR at Table 2-5. Similarly, as the DEIS notes, the impact of the Altamont project on visual resources is overstated. DEIS at 6-28. Thus, the Altamont project also is clearly superior in terms of visual impact.

Conclusion

In sum, despite the serious deficiencies in the data contained in the DEIS which we identify elsewhere, it is clear that the Altamont pipeline, with the Kern River additions, would be environmentally superior to the PGT/PG&E pipeline. The differences in the impacts presented by the two projects are quite significant. This comparison shows that Altamont's project would be environmentally superior in nine of the thirteen study areas. Those areas in which Altamont is clearly superior in every respect are: geology, soils, water quality, land use, fisheries, socioeconomics, noise, public safety, and visual resources. The two projects are even in the transportation category and, in the other three categories, the results are mixed or the data is inadequate and cannot fairly be compared. On the whole, however, the potential environmental impacts of the Altamont pipeline are substantially less than the impacts that would be presented if the PGT/PG&E pipeline were to be built.

PGT/PG&E Comments

PGT
Pacific Gas Transmission Company

Paula G. Rosput
Senior Vice President

RECEIVED BY
MAR 0 4 1991
ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

March 4, 1991

Ms. Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
Dockets Branch, Room 3110
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Docket Nos. CP89-460-000 and CP89-460-001
Draft Environmental Impact Statement

Dear Ms. Cashell:

In accordance with the guidelines laid out in the Notice of Availability, attached are the comments of the PGT-PG&E Expansion Project (Expansion Project) to the Federal Energy Regulatory Commission Draft Environmental Impact Statement (DEIS), issued on January 11, 1991.

PG1-1 The Expansion Project appreciates the balanced, well-structured character of the DEIS. The attached comments are aimed primarily at filling out certain information gaps, thereby ensuring a complete Final Environmental Impact Statement, and at clarifying certain misunderstandings of data presented thus far for the environmental review of the Expansion Project.

PG1-2 While we understand the administrative efficiency of releasing one DEIS for both the Expansion Project and the Altamont Project, we urge the staff not to delay the review of the Expansion Project because of any problems that may occur in the review of the Altamont application. This will ensure fairness in the environmental review process and is consistent with the intent of the Commission, as stated in its Order on the Expansion Project:

> "Finally, the PGT expansion project and the Altamont project are simply at different developmental stages. It would not be fair to PGT and its customers to hold up PGT's project to allow Altamont to develop a market for its project."
> (January 22, 1991 Order on CP89-460, pp.41-42)

PG1-1 Thank you for your comment. We also appreciate that your comments are limited to your project.

PG1-2 Thank you for providing this information.

PG-2

For ease of review, comments are provided on subject areas in the order of appearance in the DEIS. Please contact Gary Walker (415-973-6102) or me (415-973-6107) if there is any way we can assist in your review.

Very truly yours,

PAULA G. ROSPUT

Attachment

cc: Robert Arvadlund - FERC
Mark C. Kalpin - FERC

General Comments

In general, the PGT-PG&E Expansion Project concurs with the staff conclusion stated in the notice:

> "The staff concludes that the approval of one or both of the proposed projects, with appropriate mitigating measures, including the receipt of necessary permits and approvals, would have limited adverse environmental impact."

We further concur with the FERC staff's considering two projects in one document that "assesses the effects of the two proposals to transport natural gas from Canada to southern California" (Page S-1); and that "no conclusion should be drawn that because the two projects are being studied together, the projects are competitive with each other" (page 2-62).

This DEIS provides the decision makers the information necessary to evaluate all potential project and cumulative environmental impacts which may result from each project individually. Thus, each project can be treated, and is being treated, independently throughout the FERC proceedings.

Executive Summary, pages S-11 through S-18

The summary of "Major Impact Conclusions" as presented on pages S-11 through S-18 will be clarified in the comments on the more detailed analysis to Section 4. Upon review of those more detailed comments, this summary may need to be modified to reflect any changes to Section 4.

Executive Summary, Major Impact Conclusions, page S-15

PG1-3 The first paragraph states that PG&E's Brentwood Compressor Station would be located on prime farmland. The California Public Utilities Commission has certified construction of Alternative Compressor Station Site C, which is not located on prime farmland (soil Capability Class VI). See also Chapter 6, page 6-3, last paragraph.

Executive Summary, Major Impact Conclusions, page S-17

PG1-4 The first paragraph states that the PGT project would result in impact to numerous significant paleontologic resources. This is an inaccurate characterization since a detailed assessment of paleontological resources along the alignment is yet to be performed. This study will be undertaken in 1991 to assess the occurrence and significance of paleontological resources within the project's area of impact. Table S-2 notes that the PGT-PG&E Expansion Project will cross a number of significant

PG1-3 Thank you for this information. See revised Executive Summary and Chapter 6.

PG1-4 Comment noted. See revised Executive Summary and Chapter 6.

PG1-4 (cont.)	paleontological formations but at present one cannot conclude that the PGT-PG&E Expansion Project would impact any significant resources within these formations. (Comments also apply to Chapter 6, Conclusions and Recommendations, page 6-9, fifth paragraph.)	
PG1-5	The sixth paragraph indicates that there is a high probability for landslide activity and slope instability to threaten the integrity of the pipeline at the proposed Hannafin Canyon crossing. This is contrary to PGT-PG&E's assessment of slope conditions at the proposed crossing. Although the slopes are quite steep, there is no evidence of unstable slope conditions on the crossing alignment. (Comments also apply to Chapter 4, Environmental Consequences, Geology, page 4A-2,, paragraph 6 and Chapter 6, Conclusions and Recommendations, page 6-10, third paragraph.)	PG1-5 Comment noted. The reference to the probability of landslide activity and slope instability as being "high" has been deleted.
	Chapter 1, California Gas Demand Section, pages 1-5 through 1-8	
PG1-6	The DEIS cites the 1989 California Gas Report (CGR) in the text and accompanying tables. The FEIS should reference the 1990 CGR, which was released in August 1990. The 1990 CGR includes historical data for 1989, as well as forecasts of gas requirements through 2010. A copy of the 1990 CGR is included as Attachment A. Chapter 1, California Supply Section, pages 1-9 through 1-10 This section should also reference California supply data presented in the 1990 CGR.	PG1-6 Thank you for this additional information. Due to the size of the CGR, it is not being reproduced in the FEIS but is available for review at the FERC.
	Chapter 1, California Supply Section, page 1-9, last paragraph	
PG1-7	The word "southern" (before "California") should be stricken from the first sentence.	PG1-7 Comment accepted.
	Chapter 1, California Supply Section, page 1-9, last paragraph	
PG1-8	The DEIS states that the firm delivery capacity of the PGT system at the Oregon-California border is 1,017 MMcf/d. To reflect the December 21, 1990, Order on Rehearing (Docket Nos. RP87-62-003 and RP86-148-005), the statement should indicate that the firm delivery capacity of the PGT system at the Oregon-California border is 1,066 MMcf/d; this figure represents the Maximum Daily Demand for PL-1 service, the only firm service to California.	PG1-8 Comment accepted.
	Chapter 1, California Supply Section, page 1-10	
	The discussion of curtailments in southern California should be expanded to mention of the winter 1989-1990 curtailments in	

PG1-9 both southern and northern California. Thus, the second paragraph should read as follows:

> **Recent Curtailments in California.** Curtailments of gas service occurred to noncore customers in southern California during winter 1987-1988, summer 1988, winter 1988-1989, winter 1989-1990, and again in winter 1990-1991. Curtailments of gas service to noncore customers in northern California also occurred during winter 1988-1989, winter 1989-1990, and winter 1990-1991. A summary of recent statewide curtailments as reported in the 1990 CGR is shown in the following table. These events have focused attention on whether present gas service is sufficient to meet California energy needs.

Recent Gas Curtailments in California
(MMcf)

Calendar Year	Northern California	Southern California	Total
1987	4,745	4,015	8,760
1988	31,025	14,235	45,260
1989	29,200	59,860	89,060

Source: 1990 California Gas Report

Chapter 1, California Supply Section, page 1-11

PG1-10 The California Public Utilities Commission (CPUC) issued a certificate of public convenience and necessity for the California portion of the PGT-PG&E Expansion Project in its Decision 90-12-119, issued December 27, 1990. Page 1-11 should be changed to reflect the CPUC's action.

Chapter 1, Introduction, "Compliance with CEQA and NEPA", page 1-14

PG1-11 The discussion of interstate alternatives in the FEIR and the FERC adoption of such, needs to be further clarified. The FERC makes it quite clear in Section 2.5 "System Alternatives" (page 2-62) that "no conclusion should be drawn...that the [PGT-PG&E Expansion Project and Altamont) projects are competitive with each other. The FEIR, however, does not make this distinction clear. As such, federal agencies such as the Sacramento District of the Corps of Engineers need FERC to spell out clearly that while the FEIR will be largely incorporated, FERC maintains that interstate projects such as Altamont are not

PG1-9 Comment accepted.

PG1-10 Comment accepted.

PG1-11 Thank you for your comment. The FERC staff believes that its discussion of this issue is adequate.

alternatives to the PGT-PG&E Expansion Project in California (or the three northerly states).

Chapter 1, Introduction, Table 1-4, Pages 1-20 and 1-21

PG1-12 Permit, Approval, and Consultation Requirements for the PGT and Altamont Projects needs to address additional permits for the state of Oregon. These include:

Oregon Department of Fish and Wildlife

In-Water Blasting Permit

- Assures that adequate safeguards will be taken to protect fish life during blasting operations.

Oregon Department of Parks and Recreation

Change Land Use, or Engage in Regulated Activities Within the Oregon Scenic Waterways System

- Consider issuance of a permit for the John Day River crossing.

Oregon Division of State Lands

Submerged/Submersible Lands Easement

- In addition to considering an easement to cross the John Day River, DSL will consider an easement to cross the Lost River and the Williamson River.

Permit for Removal or Filling in Scenic Waterways

- Consider issuance of a joint permit with the Portland District Corps of Engineers for the John Day River crossing.

Umatilla County Planning Department

Conditional Use Permit

- Consider issuance of conditional use permit for material storage site.

Morrow County Planning Department

Conditional Use Permit

- Consider issuance of conditional use permit for material storage site.

PG1-12 Comment accepted.

PG1-12 (cont.)

Gilliam County Planning Department

Conditional Use Permit

- Consider issuance of conditional use permit for material storage site.

Deschutes County Planning Department

Conditional Use Permit

- Consider issuance of conditional use permit for material storage site.

Chapter 1, Introduction, Table 1-4, page 1-21

The State of Washington's State Environmental Policy Act (SEPA) process should be referenced in this table. The Washington Department of Ecology (DOE) is the lead state agency for the PGT-PG&E Expansion Project. Like the federal process, the Washington state review considers the impact of projects which may potentially result in significant impacts to Washington resources. The DOE is currently reviewing the federal DEIS for compliance with SEPA guidelines.

Chapter 2, Project Description, Section 2.3.2, page 2-22

PG1-13 The DEIS identifies Alternative C as the PG&E preferred route to avoid the Jepson Prairie Reserve. Alternative C was PG&E's initially preferred route; however, in order to minimize environmental impacts to both vernal and playa pools, PG&E identified Alternative B. In its decision dated December 27, 1990 (page 141), the CPUC directed that Alternative B, as illustrated on Figure 2-3, page 2-23, be the preferred reroute. PG&E has adopted this reroute.

Chapter 2, Project Description, Section 2.3.2, page 2-22

The DEIS describes the proposed route, Alternative 1, which departs from the existing pipeline to avoid the rapidly urbanizing Brentwood-Antioch area and connects to Brentwood Compressor Station which is proposed to be expanded. In its decision dated December 27, 1990 (pages 141-142), the CPUC directed that route Alternative 4 (modified) and alternative Compressor Station Site C be used for this reroute. These alternatives are illustrated on Figure 2-4, pages 2-25 and 2-26 and discussed in the CPUC final EIR. PG&E has adopted this reroute.

Chapter 2, Project Description, page 2-39 and Table 2-8

PG1-13 Thank you for this information. See revised Chapter 2.

PG-8

PG1-14	The discussion on page 2-39 and Table 2-8 as they relate to the construction schedule should be modified to reflect the schedule that was submitted to the FERC by letter dated December 21, 1990. As presented in that letter, the initial one-year construction schedule was a tentative schedule and is no longer appropriate due to requirements to minimize environmental disturbance, minimize throughput constraints, manage costs of construction and reduce risk of completion delays. Therefore, as presented in the above-referenced letter, PGT-PG&E intend to construct the pipeline over a two-year period (1992-1993). In addition, the borings of the sensitive Sacramento Delta area will be accomplished in the fall of 1991.	PG1-14	Thank you for this information. The letter the commentor references indicated that PGT/PG&E tentatively proposed to revise its construction schedule. Chapter 2 has been revised to correctly reflect PGT/PG&E's tentative revision of its construction schedule.
	Chapter 3E, Vegetation and Wildlife, page 3E-2, paragraph 5		
PG1-15	The statement that the method of using NWI maps and aerial photos tends to underestimate the amount of jurisdictional wetlands is incorrect. Use of NWI maps alone would underestimate the amount of jurisdictional wetlands. However, as with the Altamont Project, vegetation and topographic features indicated in aerial photos were also used in developing the list of stream crossings for the PGT-PG&E Expansion Project. Therefore the same conclusion about the Altamont wetland list -- that use of one parameter, in this case vegetation, will tend to overestimate the number of wetlands -- is equally valid for the PGT-PG&E Expansion Project wetland list. The list of wetland crossings for the PGT-PG&E Expansion Project relied primarily on aerial photos, especially since NWI maps for much of the route have only recently become available. Therefore, the lists for the two projects are relatively comparable.	PG1-15	Comment noted. The FERC staff reviewed both NWI maps and aerial photographs to identify the occurrence of wetlands along PGT/PG&E's proposed route. However, given the low quality of the aerial photographs filed by PGT with the Commission, the FERC staff believes that it may have underestimated the occurrence of wetlands along PGT/PG&E's route. In addition, given the fact that no NWI maps were available for the Altamont route, and that riparian vegetation is difficult to distinguish from wetland vegetation on aerial photographs in the region where the Altamont Project is located, the FERC staff believes that it may have overestimated the occurrence of wetlands along Altamont's route.
	Chapter 3E, Vegetation and Wildlife, page 3E-5, paragraph 2		
PG1-16	Two vegetation types, oak woodland and Central Valley grassland, are listed in this paragraph but not described further in the section titled "Vegetation Types and Associated Wildlife."	PG1-16	Thank you for this information. The oak woodland Central Valley grassland vegetation types occur in California. Therefore, reference to these vegetation types has been deleted.
	Chapter 3E, Vegetation and Wildlife, page 3E-5, paragraph 3		
PG1-17	The Final Report on Surveys for Special-Status Wildlife (Harding Lawson Associates 1990) should be included in these references.	PG1-17	The FERC staff has utilized this information in the development of its Biological Assessment. The references provided in the paragraph cited pertain to common wildlife species, and not special-status species to which the Harding Lawson Associates Report applies.
	Chapter 3E, Vegetation and Wildlife, page 3E-12, Table 3E-3		
PG1-18	The subspecies of Townsend's big-eared bat likely to occur along the PGT-PG&E Expansion Project route in Idaho and Washington is Plecotus townsendii pallescens. Plecotus townsendii townsendii is primarily restricted to the more humid coastal belt of the Pacific states.	PG1-18	Comment accepted.
	Chapter 3E, Vegetation and Wildlife, page 3E-13, Table 3E-3		

PG1-19 Habitat for the Swainson's hawk is located in Whitman, Columbia, and Walla Walla counties.

See comment on page 3E-12 on Townsend's big-eared bat.

Chapter 3E, Vegetation and Wildlife, page 3E-14, Table 3E-3

PG1-20 Habitat for the Swainson's hawk is located in Morrow, Gilliam, Sherman, Wasco, Jefferson, and Crook counties.

Chapter 3E, Vegetation and Wildlife, page 3E-15, Table 3E-3

PG1-21 Habitat for the California wolverine is located in eastern Shasta and Tehama counties. Habitat for the Townsend's big-eared bat is located in Modoc County. Habitat for the Swainson's hawk is located in Modoc, Tehama, and Solano counties. Habitat for the Greater sandhill crane is located in Modoc, Shasta, and Tehama counties.

Chapter 3E, Vegetation and Wildlife, page 3E-18, Table 3E-4

PG1-22 Moose should be included as a game species with habitat in Idaho.

Chapter 3E, Vegetation and Wildlife, page 3E-20, Table 3E-4

PG1-23 According to USFS and ODFW, the spring and summer pronghorn range is more accurately located between M.P.s 417-427 and the first migration corridor more accurately ends at M.P. 427, slightly south of the Madras Compressor Station.

Chapter 3E, Vegetation and Wildlife, page 3E-23, paragraphs 5 and 6

PG1-24 Western snowy plover and Townsend's big-eared bat were surveyed by Harding Lawson Associates and were not deleted from additional study as suggested in paragraph 3. Townsend's big-eared bats were roosting in caves at Milepost 633 and 636 in California. Each cave hosted only an individual bat.

Chapter 3L, Visual Resources, Environmental Consequences, Table 3L-1 - Idaho, page 3L-6

PG1-25 Buzzard Lake is located approximately 0.2 miles from the PGT-PG&E pipeline right-of-way. The lake is surrounded by dense stands of pine and fir. The right-of-way is not within the Buzzard Lake viewshed.

Chapter 3L, Visual Resources, Environmental Consequences, Table 3L-1 - Oregon, page 3L-7

PG1-19 Comment accepted.

PG1-20 Comment accepted.

PG1-21 As stated in Chapter 1, the FERC staff has only examined potential impact on federal-listed species in the state of California.

PG1-22 No important habitat for moose is crossed by the PGT Project in Idaho.

PG1-23 Thank you for this information. Comment noted.

PG1-24 Thank you for this information. See response to Comment No. 21. Chapter 3E, 4E, and Appendix E have been revised as appropriate.

PG1-25 Chapter 3L describes the areas of visual concern in the vicinity of the proposed route. See Chapter 4L for impact analysis.

PG1-26 Lava Butte is approximately 0.65 miles from the PGT-PG&E pipeline right-of-way. Although the top of the butte is at an elevation higher that the pipeline, only a small portion of the right-of-way 3.5 miles southwest of Lava Butte is visible from the top of Lava Butte. This brief viewing of the right-of-way from middleground distance zone will have a low visual impact on visitors to Lava Butte.

The entrance to Lava River Cave is approximately 0.25 miles from the PGT-PG&E pipeline right-of-way. The right-of-way is not visible from the Lava River Cave visitor area. Very dense stands of Ponderosa Pine and lower growing plants obscure views of the PGT-PG&E right-of-way from the visitor area. No trails lead from the visitor area to the PGT-PG&E right-of-way.

Chapter 4A, Geology, page 4A-3, paragraphs 1, 3 and 4

PG1-27 The text states that the "...Hannafin Canyon Variation would be located entirely on the level plateau surrounding Hannafin Canyon, and would avoid the steep terrain associated with PGT's proposed JDV." The route shown in Figure 6-2 accurately depicts the description provided in this section. However, the route shown in Figure 8A of the Map Volume would not be located entirely on the level terrain but would cross four steep canyons in the 7.7-mile length of the alternative route. The route would require approximately 1.5 miles of new access roads, result in approximately 5,000 feet of sidehill construction, and cross approximately 68 acres of cultivated land compared to 15 acres along the proposed John Day Variation. The route depicted in Figure 6-2 would result in an incremental cost increase of $6,400,000, whereas the route depicted in Figure 8A would result in an incremental cost increase of $3,400,000 over the proposed John Day Variation.

The statement that the Walker Rim and Wallula Gap fault zones offset Pleistocene rocks and are therefore considered to be of Holocene age (less than 10,000 years old) is not quite accurate. It is more correct to state that the faults should be considered Quaternary age, because Pleistocene rocks can range in age from about ten thousand to two million years old. It is not known that these faults are Holocene. The basic conclusion that the faults should be considered potentially active remains correct, however.

Chapter 4D, Environmental Consequences, Land Use, page 4D-8

PG1-28 The third paragraph on the page is in error by stating that the "...BLM management plan restricts all crossings of the John Day River, a designated National Wild and Scenic River..." The BLM management plan restricts crossing of the John Day River to approved corridors. Although the Project crosses the John Day River on private lands it is still under the jurisdiction of the

PG1-26 Same as previous response to Comment PG1-25.

PG1-27 Thank you for this information. See revised Chapter 4A.

PG1-28 Comment noted. See revised Chapter 4D.

PG1-28 (cont.) BLM. The pipeline crosses the river in an approved utility corridor and is therefore consistent with the BLM management plan.

Chapter 4E, Vegetation and Wildlife, page 4E-3, paragraph 6

PG1-29 Rare wildlife and plant surveys for the PGT-PG&E Expansion Project are complete except for newly identified laydown areas and areas where property access has not been possible. These areas constitute only a few acres and surveys will be conducted this summer. The surveys for wildlife were conducted during March through November and not March through May.

Chapter 4E, Vegetation and Wildlife, page 4E-5, paragraphs 2 and 3

PG1-30 See comment on page 3E-2, paragraph 5.

Chapter 4E, Vegetation and Wildlife, page 4E-12, paragraph 1

PG1-31 Surveys were conducted for these species in 1990. An individual *Botrychium minganense* was found near M.P. 18.

Chapter 4E, Vegetation and Wildlife, page 4E-13, paragraph 4

PG1-32 The stream enhancement measures being developed for the Moyie River are expected to improve significantly the fishery in the river and as a result, improve the prey base for bald eagles. Please see the Fisheries Enhancement Plan which has been submitted to FERC as an appendix to the Moyie River Plan.

Chapter 4E, Vegetation and Wildlife, pages 4E-14 through 4E-15, Table 4E-2

PG1-33 See comment on page 3E-2, paragraph 5. Surveys conducted for these species in 1990 documented the presence of one of the ten special status species identified by this table for Oregon. Four populations of *Astragalus peckii* were found near M.P.s 522, 526, 527, and 529.

Chapter 4E, Vegetation and Wildlife, pages 4E-15 through 4E-21, Table 4E-2

PG1-34 Surveys were conducted for these species in 1990. In addition to the observations noted in the table, *Aster chilensis* var. *lentus* was found at M.P. 910, *Lilaeopsis masonii* was found at M.P.s 906, 906.5, 910, and 913.6, and *Lathyrus jepsonii* var *jepsonii* was found near M.P. 910.

Chapter 4E, Vegetation and Wildlife, page 4E-23, paragraph 2

PG1-29 Comment noted.

PG1-30 See response to Comment PG1-15.

PG1-31 Comment noted. See revised Chapter 4E.

PG1-32 Thank you for your opinion.

PG1-33 Comment noted. See revised Chapter 4E.

PG1-34 Thank you for this information. See response to Comment PG1-21

PG1-35	An alternative to avoiding construction during the upland sandpiper nesting season (May 1 through September 1) is to clear the right-of-way prior to the nesting season. This would result in the birds being displaced into adjacent grasslands for one season but would prevent mortality of adults or young. This procedure was previously endorsed by the Washington Department of Wildlife during the prebuild portion of the ANGTS. In any case, there should be no need to avoid constructing in the upland sandpiper habitat if there is no indication that the sandpiper occupying the area during the year of construction. PGT recommends inserting "if occupied" between "this area" and "between May 1 through September 1.	PG1-35	Comment noted. See revised Chapter 4E.
	Chapter 4E, Vegetation and Wildlife, page 4E-23, paragraph 5		
PG1-36	Proposed enhancements to the Moyie River should create additional slack-water, brood-rearing habitat for Harlequin ducks. See comment for page 4E-13, paragraph 4.	PG1-36	Thank you for this information. No response required.
	Chapter 4E, Vegetation and Wildlife, page 4E-27, paragraph 1		
PG1-37	The pygmy rabbit habitat was surveyed in 1990 and no populations were found. PGT recommends inserting "although no pygmy rabbits were found in 1990 surveys." after "Construction would disturb 7.9 acres of potential pygmy rabbit habitat" PGT recommends changing the last sentence to read "To reduce these impacts to less-than-significant levels, we recommend that PGT resurvey its construction right-of-way in this location 45 days prior to construction to assess actual use by pygmy rabbits, and to avoid construction within 500 feet of any occupied pygmy rabbit burrows during breeding and rearing season."	PG1-37	Comment noted. See revised Chapter 4E.
	Chapter 4E, Vegetation and Wildlife, page 4E-27, paragraph 2		
PG1-38	Recent discussions with the Washington Department of Wildlife and other research as part of the PGT-PG&E Expansion Project's wildlife surveys indicate that there is no Townsend's western big-eared bat hibernacula, nursery colonies, or suitable roosting habitat near the route of the pipeline. See also comment on subspecies for Table 3E-3, page 3E-12.	PG1-38	Comment noted. See revised Chapter 4E.
	Chapter 4E, Vegetation and Wildlife, page 4E-29, paragraph 2		
PG1-39	There are several field-tested alternatives in lieu of absolute avoidance of construction within one-half mile of an active raptor nest, excluding bald eagle nests. These include monitoring of the nest by a qualified biologist to determine response of the birds to the disturbance. If eggs or young are determined to be at risk due to prolonged absence of adults or nest abandonment, the eggs or young could be collected and fostered, cross-fostered, or reared in captivity for subsequent release in the wild. In addition, the active nest can often be	PG1-39	Thank you for your comment. The staff's recommended mitigation measure would ensure that nesting raptors would not be affected by construction of the PGT Project. However, PGT's suggested mitigation only serves to minimize an impact that has already occurred. Therefore, the staff stands by its recommendation.

PG1-39 (cont.) relocated away from a disturbance with no decline in productivity. These measures should at least be appropriate for a relatively common raptor such as a red-tailed hawk.

PGT will resurvey for raptors 45 days before construction in suitable habitat.

Chapter 4E, Vegetation and Wildlife, page 4E-30, paragraph 1

PG1-40 An alternative to avoiding construction during the long-billed curlew nesting season is to clear the right-of-way prior to nesting season. See comment on page 4E-23, paragraph 2 on the upland sandpiper.

Chapter 4E, Vegetation and Wildlife, page 4E-30, paragraph 6

PG1-41 See comment for page 4E-29, paragraph 2.

Chapter 4E, Vegetation and Wildlife, page 4E-33, paragraph 6

PG1-42 The 1990 surveys indicate that a limited number of bats are likely to use these caves only for occasional roosting and not for hibernation or as a nursery. PGT will survey the caves again 45 days prior to construction to determine bat use.

Chapter 4E, Vegetation and Wildlife, page 4E-36, paragraph 5

PG1-43 PGT surveyed for kit fox during the 1990 wildlife surveys and none were found. PGT will resurvey for kit fox 45 days prior to construction in kit fox habitat.

Chapter 4E, Vegetation and Wildlife, page 4E-36, paragraph 8

PG1-44 There is a possible colony of Washington ground squirrels located 100 feet off the right-of-way near M.P. 238 in Washington. PGT will resurvey 45 days prior to construction at this location to determine ground squirrel use.

Chapter 4E, Vegetation and Wildlife, page 4E-37, paragraph 7

PG1-45 Swainson's hawk nests were located within one-half mile of the right-of-way in the 1990 wildlife surveys.

Chapter 4E, Vegetation and Wildlife, page 4E-38, paragraph 3

PG1-46 A long-billed curlew nest was found near M.P. 286. PGT will resurvey 45 days prior to construction at this location to determine if any nesting long-billed curlews are present.

Chapter 4E, Vegetation and Wildlife, page 4E-39, paragraph 4

PG1-47 See comment on page 4E-29, paragraph 2.

PG1-40 See response to Comment No. PG1-35.

PG1-41 See response to Comment No. PG1-39.

PG1-42 Thank you for this information. No response required.

PG1-43 Comment noted. See revised Chapter 4E.

PG1-44 Thank you for this information.

PG1-45 Comment noted. See revised Chapter 4E.

PG1-46 Thank you for this information.

PG1-47 See response to Comment No. PG1-39.

PG1-48	Chapter 4E, Vegetation and Wildlife, page 4E-41, paragraph 7 In meetings with ODFW, it has agreed to allow PGT to refill the open trench with a plug of at least 80 feet wide at no less than 400-yard intervals in order to provide a crossing for the migrating deer. The trench would never be left unplugged overnight during construction through the deer migration corridors. ODFW did not believe either construction avoidance or the plugs are necessary for deer migration in the corridors between M.P.s 412 and 413 and M.P.s 426 and 427, due to the relatively low density of the deer population.	PG1-48	The FERC staff is aware that PGT and the ODFW have discussed this issue. However, at this point in time ODFW has not informed the staff that it has reached an agreement with PGT on this issue. Therefore, the staff's recommended mitigation measures stands.
PG1-49	Chapter 4E, Vegetation and Wildlife, page 4E-43, paragraph 4 In meetings with ODFW and USFS, they have agreed to allow PGT to construct through the pronghorn range between M.P.s 417 and 427 provided the trench is plugged in the manner described in the comment for page 4E-41, paragraph 7.	PG1-49	See response to Comment No. PG1-48.
PG1-50	Chapter 4E, Vegetation and Wildlife, page 4E-44, paragraph 1 PG&E's preferred route is Route B which does not pass between or anywhere near large playa pools near Jepson Prairie. Field surveys for rare plants are complete and no *Tuctoria mucronata* was found in either of the playa pools adjacent to the proposed route. Due in part to drought conditions, however, this species has not been observed in any locations since 1987.	PG1-50	Comment noted. See revised Chapter 4E.
PG1-51	Chapter 4E, Vegetation and Wildlife, page 4E-44, paragraph 3 Detailed surveys for the *Amsinckia grandiflora* were conducted in 1990 and no plants were found, although a known population was observed for comparison during 1990. The PGT-PG&E Expansion Project will conduct follow-up surveys if a winter wetter than that prior to the original survey occurs prior to construction.	PG1-51	Comment noted. See revised Chapter 4E.
PG1-52	Chapter 4E, Vegetation and Wildlife, page 4E-44, paragraph 4 Detailed surveys for the *Cordylanthus palmatus* were conducted in 1990 and no plants were found, although a known population was observed for comparison during 1990. The PGT-PG&E Expansion Project will conduct follow-up surveys if a winter wetter than 1989-1990 occurs prior to construction.	PG1-52	Comment noted. See revised Chapter 4E.
PG1-53	Chapter 4F, Fisheries, page 4F-7, paragraph 2 The Lost River sucker has been known to occur in certain unscreened irrigation canals in the Lost River drainage. The PGT-PG&E Expansion Project will either bore underneath these canals or cross them when they are already dry during their regular seasonal dewatering by the irrigation districts.	PG1-53	Comment noted. See revised Chapter 4E.

Chapter 4I, Noise, page 4I-2

PG1-54 PGT has now selected the turbines to be used at Compressor Stations 3, 5, and 7. These units will be Cooper-Rolls Coberra Model 6462 gas turbines rated at 30,000 horsepower (NEMA) as compared to the 25,000 horsepower (NEMA) proposed. Sound level data on these units will be provided to the FERC in conjunction with the noise analyses submitted to comply with mitigation measure No. 37.

PGT intends to install silencing on the existing unit at Station 3. Reduced sound levels will be achieved as a result of this silencing and will be reflected in the noise analyses submitted to comply with mitigation measure No. 37.

The DEIS projects an increase in sound level of 4.8 dBA at the nearest residence resulting from the proposed new unit based on the assumption that the increase in sound energy is proportional to the increase in horsepower. This assumption does not, of course, recognize any differences in noise control measures in the design and installation of the new unit. PGT is currently proceeding with the design and specification of noise control measures and will assure that the total Ldn of the existing and proposed units will not exceed a Ldn of 55 dBA at the nearest noise-sensitive area when operating at full load.

Chapter 4L, Visual Resources, page 4L-5 - Oregon and Table 4L-2 - Oregon, page 4L-6

PG1-55 Lava Butte is approximately 0.65 miles from the PGT-PG&E pipeline right-of-way. Although the top of the butte is at an elevation higher than the pipeline, only a small portion of the right-of-way 3.5 miles southwest of Lava Butte is visible from the top of Lava Butte. This brief viewing of the right-of-way from middleground distance zone will have a low visual impact on visitors to Lava Butte.

The entrance to Lava River Cave is approximately 0.25 miles from the PGT-PG&E pipeline right-of-way. The right-of-way is not visible from the Lava River Cave visitor area. Very dense stands of Ponderosa Pine and lower growing plants obscure views of the PGT-PG&E right-of-way from the visitor area. No trails lead from the visitor area to the PGT-PG&E right-of-way.

Chapter 4L, Visual Resources, Table 4L-2 - Idaho, page 4L-6

PG1-56 Buzzard Lake is located approximately 0.2 miles from the PGT-PG&E pipeline right-of-way. The lake is surrounded by dense stands of pine and fir. The right-of-way is not within the Buzzard Lake viewshed.

Chapter 6, Conclusions and Recommendations, pages 6-10 to 612

PG1-54 Comment noted. See revised Executive Summary and Chapters 2, 3I, 4H and 4I.

PG1-55 The existing right-of-way on a forested ridgeline is visible when looking southwest from the tip of Lava Butte. The proposed project would increase the size of the present gap in this treeline. Although proper restoration of the right-of-way could minimize impacts on the viewshed, we believe these impacts would be moderate and warrant the mitigation recommended in the DEIS.

After further field analysis, we agree with this assessment. See revised Chapter 4L.

PG1-56 We agree with this assessment. See revised Table 4L-2.

PG1-57 See the discussion relating to the Hannafin Canyon Alternative in our comments on Chapter 4A, page 4A-2, paragraphs 1 and 3.

In paragraph three, the text states that "...PGT proposed the John Day Variation as a means of avoiding the slope stability and pipeline integrity concerns that would be encountered by constructing along its existing pipeline route." Slope stability was not a concern on the existing route. The primary issue was pipeline integrity due to the potential of flooding on the narrow side canyons.

Chapter 6, Conclusions and Recommendations, pages 6-29 to 6-37
Mitigation Measure No. 2

PG1-58 PGT's alignment sheets have been prepared at a scale of 1:12,000, with occasional larger-scale sheets as dictated by engineering and construction requirements. As agreed with FERC staff, PGT will submit 1:12,000 scale alignment sheets rather than 1:6000.

Mitigation Measure No. 12

PG1-59 See comment for page 4E-29, paragraph 2.

Mitigation Measure No. 16

PG1-60 This mitigation measure should be clarified to pertain only to domestic gathering and distribution facilities under the Applicants' control or authority. PGT, for instance, does not have the ability to submit site-specific environmental information for a prospective shipper's distribution facilities unless that shipper has provided it to PGT. Nor can PGT submit environmental information to other state and federal agencies on the behalf of shippers, or ensure that the shippers will do so themselves.

Mitigation Measure No. 25

PG1-61 This plan has been submitted to FERC staff under separate cover.

Mitigation Measure No. 35

PG1-62 This plan is being submitted as Attachment B.

Mitigation Measure No. 37, page 6-34

PG1-63 In conjunction with engineering design, PGT is preparing noise analyses for Compressor Stations 3, 5, and 7 where compressor horsepower is being added. Since this work is currently in progress, it may not be completed prior to the

PG1-57 See revised Chapter 6.

PG1-58 Comment noted.

PG1-59 See response to Comment No. 47.

PG1-60 The staff disagrees with commentor's position. The FERC's responsibilities under the National Environmental Policy Act, the Endangered Species Act, and the National Historic Preservation Act extend to all related non-jurisdictional facilities, regardless of whether or not they are under the applicant's direct control.

PG1-61 See revised recommendation.

PG1-62 See revised recommendation.

PG1-63 Comment noted.

PG1-63 (cont.) issuance of the Final EIS. As agreed in discussions with the FERC Staff, PGT is providing, prior to the issuance of the Final EIS, a plan and schedule for completing these analyses (Attachment C).

Mitigation Measure No. 39

PG1-64 A map showing the revised laydown area is being provided as Attachment D.

Mitigation Measure No. 43

PG1-65 Detailed environmental, engineering and economic analyses for the Camp Nine and Hannafin Canyon Alternatives were submitted to FERC staff on October 22 and December 5, 1990, respectively.

Mitigation Measure No. 44

PG1-66 A construction, restoration and revegetation plan for areas containing volcanic rock intrusions is being provided as Attachment E.

Appendix B-1, Erosion Control, Revegetation, and Maintenance Plan, page B-1-5, item V.A.1.

PG1-67 Liming soil is not necessarily an effective treatment for restoration of the right-of-way, including in rangelands. The existing pH of the soil is the same in the right-of-way as in the surrounding area. Reestablishment of locally adapted species on the right-of-way requires soil conditions approximately equivalent to lands adjacent to the right-of-way. It may not be appropriate to apply lime to the right-of-way when the surrounding vegetation is tolerant of acidic soils, for example. Furthermore, liming dissipates relatively soon and reapplication is not feasible. Applying lime appears to be contrary to the USFS Vegetation Management Guidelines which encourage re-establishment of vegetation that does not need to maintained in the long-term. A more reasonable approach appears to be topsoil segregation and the use of adapted species, as included in PGT's Erosion Control and Restoration Plan.

Appendix B-1, Erosion Control, Revegetation, and Maintenance Plan, page B-1-5, item V.A.2.

PG1-68 Where necessary to apply fertilizer with herbaceous seedings, slow-release fertilizer should not be required because the best initial establishment of adapted herbaceous species may result from a fertilizer such as ammonium phosphate sulfate.

Appendix B-1, Erosion Control, Revegetation, and Maintenance Plan, page B-1-6, item V.B.1.

PG1-64 Comment noted.

PG1-65 Comment noted. See revised Chapter 6.

PG1-66 See revised Chapter 6.

PG1-67 Our Erosion Control, Revegetation, and Maintenance Plan is intended to provide a minimum degree of protection. Topsoil segregation is required in addition to the use of adapted species. We maintain that where acidic soils are found along the route, liming may be necessary if preexisting native species are not replanted. Land managing agencies may specify otherwise as they deem necessary. In addition, the FERC can waive requirements of the plan upon specific and detailed requests.

PG1-68 Ammonium phosphate may be combined with slow-release fertilizers such as rock phosphate and sulfur coated urea in the proper ratios to arrive at the required analysis and fulfill the 50 percent slow release requirement.

PG1-69 Applying jute in addition to two tons of a weed-free mulch of hay or straw along streamsides may be excessive for slopes of 10 to 30 percent, if slope breakers and silt fencing or staked hay bales are also used. Two tons of straw plus jute may inhibit seed germination for permanent erosion control. PGT recommends only jute be used on streamside slopes of 10 to 15 percent and jute plus one ton of straw be used on slopes of 15 to 30 percent, in addition to slope breakers and silt fencing or staked hay bales.

Appendix B-1, Erosion Control, Revegetation, and Maintenance Plan, page B-1-7, item V.C.4.

PG1-70 This requirement suggests drilling as a better method than broadcast seeding. This may not be true. Drilling has limitations with regards to the type of soil and terrain where it is effective. It is ideal for flat and gently sloped terrain and where soils are light. Disadvantages include the difficulty in using a variety of seeds in one drilling operation and controlling seeding depth for all these types of seed. If broadcast seeding is performed at the proper time in a prepared seedbed and dragged or raked, results can be as good as or better than drilling. Advantages of broadcast seeding include a more uniform application when using a variety of seed types, a more natural-appearing stand, and greater compatibility with mulching.

In addition, PGT requests the flexibility to apply aerial seeding when the window in which to seed is limited and the originally planned seeding method cannot be completed within this window. PGT believes, in this case, that it is better to apply seed aerially within the proper seeding period than to apply seed, using another method, at the wrong time of year. Aerial seeding after final grading can be effective if applied at the proper time. In areas with a high potential for erosion, the areas would still be mulched prior to aerial seeding. This technique has been successful in revegetation projects. In addition, it is common practice to aerial-seed after a wildfire, with no site preparation. In Idaho, the Panhandle National Forest has indicated that aerial seeding is an acceptable seeding method.

Appendix B-1, Erosion Control, Revegetation, and Maintenance Plan, page B-1-7, item V.D.1.

PG1-71 Punching or crimping this amount of straw into the soil in one application may inhibit germination of a significant portion of the seed and destroy other seed. Additionally, spreading one-quarter to one-half inch of straw on the surface can create a solid, impermeable covering, inhibiting germination of a significant portion of the seed.

PG1-69 Our plan is intended to provide a minimum degree of protection. In most cases 2 tons/acre of straw or they mulch or its equivalent is the acceptable rate. We have revised Section 5.E.7 in Appendix B to allow for a reduced rate in arid conditions where degradation of mulch would be slow and germination could be inhibited by the insulating effects of the mulch. In addition, FERC can waive specific requirements of the plan upon specific and detailed requests.

PG1-70 Comment noted. Drill seeding is allowed where feasible as specified in Appendix B. We have revised the referenced section to allow other seeding methods in visually sensitive, arid areas to reduce impacts due to drill rows. Please note that broadcast seeding would necessitate a 100 percent increase in the seeding rate.

The FERC would require more information before a decision is made to allow aerial seeding. As noted previously, applicants may file for approval of deviations.

PG1-71 We maintain that this practice under normal circumstances would provide minimal protection and it should not destroy seed. The mulch spread over the surface would not create a solid, impermeable covering. Rather it would serve to reduce erosion and hold moisture in the soil, thereby enhancing germination, while still allowing seedlings to emerge through ample species between mulch fibers.

As noted previously, the applicant may file for approval of deviations where there are extenuating circumstances.

Mulch should be applied after seeding so as not to interfere with establishment of seed/soil contact.

PG1-71 (cont.) PGT recommends punched or crimped mulching be performed at a rate of one to two tons per acre depending on the degree of slope and soil type. Surface mulching rates will vary from 800 to 1500 pounds per acre depending on the slope and climate of the area. Seeding would be applied after the first mulch application if two applications are necessary or after mulching if only one application is necessary.

Appendix B-1, Erosion Control, Revegetation, and Maintenance Plan, page B-1-8, item VI.B.

PG1-72 Trees cannot be planted directly over or immediately adjacent to the pipeline because of potential damage to the line as well as restricting access for maintenance. Access to the pipeline is essential. Partial screening and partial barriers utilizing native vegetation to "camouflage" the right-of-way are recommended.

Appendix C-3, FERC Stream and Wetland Construction and Mitigation Procedures, page C-3-6, item II.E.2.

PG1-73 PGT does not believe annual rye grass is suitable for seeding in wetland and streamside areas. Annual rye grass is known to be allelopathic to other vegetation. Where feasible, native straw seeding will be applied in riparian and wetland areas. Endemic commercially-available herbaceous species will also be used.

Map Volume, Geology, Map 18

PG1-74 Between approximately M.P.s 889 to 896, a high liquefaction potential is shown on the bar graph. This should be "LQ". Our field inspectors indicate that the potential for liquefaction is probably low in this area (the Dozier area), contrary to what was indicated in our Technical Report.

PG1-72 The staff believes that it is possible to implement the referenced measures without planting trees directly over the pipeline. In addition, the referenced section requires the applicant to implement one or more of the referenced measures; therefore, where access is required the applicant can plant trees and install locking gate.

PG1-73 The purpose of planting annual rye grass in disturbed wetland areas is to provide a temporary vegetative cover which stabilizes the area and provides some functional value. Because annual rye grass is not well adapted to wetland conditions, native species will re-establish and outcompete the rye grass over a period of 3 to 5 years. The Procedures in Appendix C-3 allow each company to develop alternative site-specific restoration measures and to submit them to the staff for its review and approval prior to construction. This would include any proposal to actively revegetate disturbed wetland areas with native wetland species.

PG1-74 Thank you for this information. No response required.

RESPONSE TO FERC MITIGATION

MEASURE #35

Attachment B

CONSTRUCTION AND RESTORATION PLAN

JOHN DAY VARIATION

Prepared by
PGT-PG&E Pipeline Expansion Project
for the
Federal Energy Regulatory Commission

February 1991

INTRODUCTION

The John Day Variation Construction and Restoration Plan was prepared in response to Item 35 of the Federal Energy Regulatory Commission's (FERC) Staff Recommended Mitigation Measures detailed in the *PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement (DEIS)*. As per Item 35, the following report provides site-specific construction and restoration plans for the John Day Canyon Variation, focusing on canyon and river crossing techniques, erosion control and right-of-way restoration, and provisions for avoiding impacts on anadromous fish populations.

I. Route Description

As shown in Figure 1, the John Day Variation is located in northern Oregon, in the vicinity of the John Day River Canyon. The Variation deviates from the existing PGT pipeline right-of-way for a total distance of 21.4 miles (see Figure 2). Initiating at M.P. 350.8 of the existing PGT right-of-way, the Variation travels 7.5 miles southwesterly across the Columbia Plateau. The proposed alignment then descends sharply into the John Day Canyon, crosses the John Day River at M.P. 10[1], and immediately ascends back onto the Columbia Plateau. The route proceeds southwesterly and drops down into Hannafin Canyon at approximately M.P. 17.6. The Variation returns to the existing PGT right-of-way about one mile north of Compressor Station No. 10 at M.P. 368.3.

II. Environmental Setting

Geology and Soils

The John Day Variation lies near the southern limits of the Columbia Plateau physiographic province. The area is characterized by elevated, fairly level terrain deeply incised by stream canyons. These stream canyons have been cut into a layered sequence of volcanic flow rock and interbedded ash and lake deposits forming high steep canyon walls which dissect the gently sloped plain. This sequence of slightly tilted basalt flows and interbedded ash and lake deposits comprises the Miocene-age Columbia River Basalt (Yakima Basalt).

The John Day Variation alignment departs from the existing pipeline right-of-way at M.P. 350.8 in gently sloped terrain mantled by fine-grained soils derived from loess. Most of the variation's length traverses the intercanyon plains topography, dipping down occasionally through minor gullies and across two major canyons, the John Day and Hannafin.

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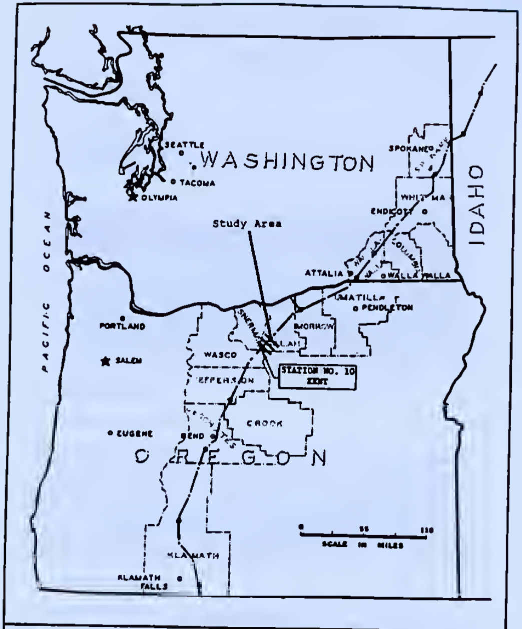
[1] Mileposts for the John Day Variation begin at 0 from the point the Variation departs the existing PGT right-of-way.



PGT-PG&E PIPELINE
EXPANSION PROJECT

Figure 1
Vicinity Map
John Day Variation

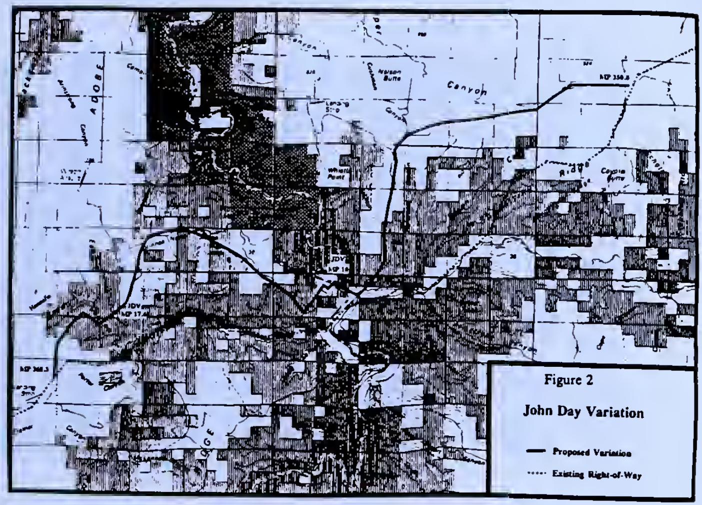


Figure 2

John Day Variation

— Proposed Variation

····· Existing Right-of-Way

The slopes in the John Day River Canyon have been subject to instability caused by rapid downcutting of the river, weak horizons interbedded with competent volcanic flow rock, and past, wetter climates. As a result of this combination of unfavorable conditions, several massive landslides have occurred in the Canyon. Most of these slides, including one at the proposed crossing, appear to be dormant and have not moved substantially for several hundred years. Survey monitoring of the landslide area since 1976 has shown only minor movements (less than 0.06 feet, vertically) of monuments set on the landslide mass.[3] Slopes on the southern side of the John Day River crossing are steeper than the northern side, but appear to be stable along the proposed pipeline alignment.

At M.P. 17.6 the proposed alignment crosses Hannafin Canyon, a steep-sided canyon eroded by intermittent runoff. The slopes at this crossing appear to be relatively stable with no apparent landslide activity taking place in the crossing alignment. Some evidence of gully erosion and minor slumping of the north canyon, however, is apparent approximately 100 feet upstream of the proposed crossing. The southern canyon wall is somewhat steeper but shows no evidence of slumping, gully erosion or instability.

For both canyons, canyon construction techniques will begin and end at an elevation of approximately 2400 feet. John Day Canyon drops from the 2400 foot elevation to approximately 1000 feet at the base of the Canyon over a linear distance of two miles. Hannafin Canyon drops 1000 feet in elevation over a distance of only one mile. The steepest slopes are found along the southwest wall of the John Day Canyon and both sides of Hannafin Canyon.

Water Resources

The John Day River flows in a westerly direction through central Oregon and then flows northerly to join the Columbia River two miles upstream of the John Day Dam. The proposed pipeline right-of-way descends into the John Day Canyon, crossing the John Day River near the confluence of Thirty Mile Creek, at Milepost 10. Average flows are approximately 2100 cfs. Flood season generally begins in November, peaks in April and decreases in July. The John Day River, is designated a National Wild and Scenic River as well as an Oregon Scenic Waterway at the proposed pipeline crossing location.

The water quality of the John Day River is generally good. Major problems consist of high sedimentation and turbidity during spring runoff and elevated water temperature in late summer. The river has been designated as "suspected water

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[3] An on-the-ground inspection to further verify slope conditions at the landslide area will be conducted in the spring of 1991.

Land Use and Visual Resources

The dominant land use in the vicinity of the John Day Variation is agriculture, with recreational designations at the John Day River crossing. The John Day River and surrounding area have many recreational uses including rafting, hunting, and fishing.

Land ownership along the variation includes private ownership, federal Bureau of Land Management (BLM), and state and federal recreation areas. The BLM categorizes the John Day River as Class II within their Visual Resource Management Objectives system. The management objective for Class II is to retain the existing character of the landscape.

III. Construction Procedures

Much of the proposed John Day Variation will be constructed following the standard construction procedures outlined in the DEIS, Section 2.2, "General Construction, Operation and Maintenance Procedures". As detailed in the DEIS, these procedures include surveying, clearing and grading the right-of-way and temporary work areas, excavating and preparing pipeline trenches, installing the pipe, backfilling, marking the pipeline location, and restoring the right-of-way. Conditions unique to construction of the John Day Variation include:

Sidehill Construction

As shown in Figure 3, approximately two miles of sidehill construction is anticipated for construction of the John Day Variation. Sidehill construction may require grading at two elevations (two-toning) along the slope. As discussed in Section IV of this Plan, impacted areas will be restored after construction to approximate original contours.

Blasting

In areas where rock is encountered, blasting will be used to excavate trenches. For the John Day Variation, it is anticipated that blasting will be necessary at various locations along the route from north of John Day Canyon to south of Hannafin Canyon (See Figure 3). In the case of blasting, advance notice will be provided to property owners and flaggers will be posted to protect the public. Blasting mats (and/or a reduction in charges) will be used to minimize flyrock as necessary.

Canyon Crossings

The steep slopes of the John Day and Hannafin Canyons present unique conditions for pipeline construction. Special construction techniques to be employed for the canyon crossings are detailed below.

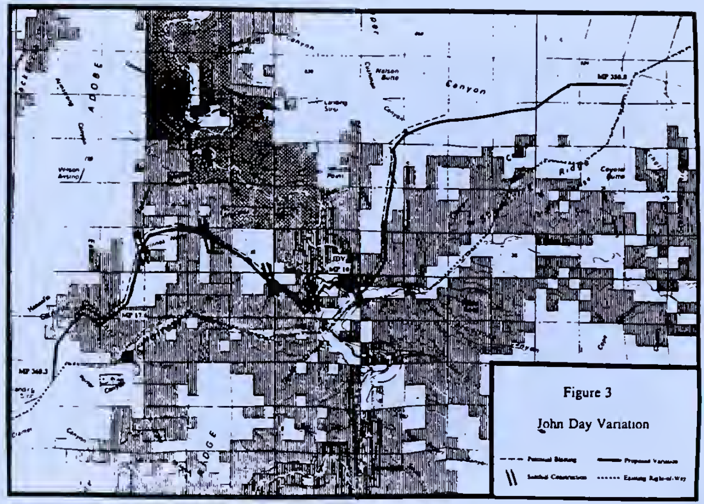

Figure 3

John Day Variation

Canyon slope construction will be conducted from the tops of the canyons (at an elevation of approximately 2400 feet) to the floor of the canyons. The first step in the crossing process will be to establish staging areas on either side of the canyon walls. The staging areas will be approximately 100 feet x 300 feet. These areas will be used to store pipe, stage equipment and establish winch and cable systems to secure the operating equipment as it is lowered into the canyons.

Trenching down the canyon slopes will be accomplished by lowering excavating equipment down the canyon walls on cables. As discussed above, blasting will be used as necessary to excavate through rock. The pipeline will then be installed by side-boom tractors, each carrying an 80 foot section of pipe, down into the canyon. Each tractor will be winched off adjacent to the next and the pipe sections will be welded in place. After the entire length of pipe is in place along the trench line, it will lowered into the trench.

John Day River Crossing

The John Day River crossing will be constructed in compliance with the FERC Stream and Wetland Construction and Mitigation Procedures detailed in Appendix C-3 of the DEIS. All necessary federal, state, and local regulatory permits will be obtained and all appropriate measures will be undertaken to protect the stream channel and river banks.

The John Day River crossing will be constructed from a staging area to be established on the southwest side of the river. The staging area will be used to store the pipe, apply concrete coating, and weld and test the assembled pipeline length for the total length of the crossing. The total area required for the staging area is 100 feet wide by 300 feet long. The staging area will be located at least 100 feet from the river bank as per the FERC Stream and Wetland Construction and Mitigation Procedures.[4]

The John Day River will be trenched by an open-cut method, using backhoes and blasting as necessary. Excavated materials will be placed in the river on the upstream side of the trench and bladed down. This material will be used as a base to drive trenching and installation equipment across the river. Excavated material will not block the river channel; the stream flow will be maintained at all times during construction.[5]

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[4] The pipe for the river crossing may be delivered on site with the concrete coating already applied, in which case the staging area may be located within 50 feet of the riverbank. The final decision on the application of the concrete coating will be left to the discretion of the contractor.

[5] Coffer dams may be used at the discretion of the contractor.

The assembled pipeline length for the river crossing will be installed with sideboom tractors. Excavated spoil will be replaced in the trench over the pipeline. The pipeline will be buried up to 10 feet below the scour line.

Upon completion of construction activities, the river banks, cleared right-of-way and temporary work areas will be restored to original contours.

Construction Schedule

Construction of the John Day Variation will take place between January and November 1992. Work within the John Day River will be restricted to a window between July 15 and August 31 in order to avoid (or minimize) impacts to anadromous fish populations and resident trout. The construction window for work within the River is based on consultations with the Oregon Department of Fish and Wildlife.

IV. Erosion Control and Restoration Plan

The proposed mitigation plan will comply with the requirements of the DEIS, Erosion Control, Revegetation, and Maintenance Plan, Appendix B-1 and the Stream and Wetland Construction and Mitigation Procedures detailed in Appendix C-3. Table 1 of this document summarizes the erosion control and revegetation mitigation measures applicable for construction of the John Day Canyon Route Variation.

Erosion Control

Engineering measures to control erosion along the Variation will include:

- minimizing disturbance in the construction area,
- compacting backfill soil,
- reestablishing natural grade,
- minimizing or eliminating berming,
- topdressing over the trenchline with native soil when feasible,
- establishing slope breakers or water bars and trench plugs;
- implementing revegetation plans immediately after final grading, and
- installing boulders, cobble and water checks along the river bank as needed.

Revegetation

Revegetation of the proposed John Day Variation Route will be implemented on unfarmed land immediately following construction. Seeding methods will generally include broadcast seeding applied by ground equipment or helicopter; native straw seeding will be used on the steep slopes of the John Day and Hannafin Canyons. Preparing the seedbed and incorporating seed into the soil surface will also be performed where feasible. Commercially available seed will be used as recommended by FERC in the DEIS, in addition to other appropriate seeds as identified in the pilot study. A second application of the grass seed mix will be applied by helicopter after mulching is completed in the critical areas. Fertilizer will be applied by broadcasting with ground equipment or helicopter. Ammonium phosphate sulfate will be applied at a rate of 320 pounds per acre.

Special seeding specifications which will be submitted to the FERC prior tc construction will address:

- Seeding of the John Day and Hannafin Canyons, which will include incorporating pretreated seed of Juniper occidentalis with the seed mix.
- Seeding rates for sloped areas. Rates will be increased in sloped areas to enhance plant establishment.
- Reseeding of the canyon floors and the river crossing. Seeding will include both broadcast seeding and native straw seeding. Mulching and silt barriers will be implemented as required in the DEIS.

PG-30

RESPONSE TO FERC MITIGATION

MEASURE #37

Attachment C

Task List and Schedule for Preparation of Response to FERC's Request for Noise Analyses for Stations 3,5 & 7 Using Farfield Data

Task	Completion Date
1) Develop Comparison of Noise Model for Existing Station 3 and Field Measurements	Done
o Prepare Existing Noise Model	
o Review Field Data	
o Prepare Write-up describing Modelling Approach	
2) Revise Noise Model for Refurbished Station 3 Unit A and Expansion Station 3 Unit B.	29 March 91
o Finalize approach on modelling of Refurbished Unit A.	
o Revise Model of Refurbished Unit A	
o Finish Lab Analysis of Field Collected Data	
o Develop Noise Controls for Unit B Turbine/Compressor Building	
o Determine Appropriate Building Wall Construction	
o Revise & Check Noise Model	
o Prepare Write-up	

PG-32

3) Prepare Noise Model for Station 5 based on Expansion Equipment Noise Predictions and Measurement of Existing Station Noise. 5 April 91

   - Develop Noise Controls for Unit C Turbine/Compressor Building
   - Prepare Write-up

4) Prepare Noise Model for Station 7 based on Expansion Equipment Noise Predictions and Measurement of Existing Station Noise. 12 April 91

   - Develop Noise Controls for Unit C Turbine/Compressor Building
   - Prepare Write-up

Comparison of Noise Prediction Model of Existing Station 3 and Field Measurements

A noise model of the existing noise sources at Station 3 has been developed for comparison to field measurements made at the nearest house, the Stevens residence. The purpose of this model is to validate the noise prediction techniques used in developing and specifying noise controls for the pipeline expansion project. The basic approach used in performing noise predictions is to predict the farfield sound pressure level of individual sources, which are then summed to yield the overall expected noise level. The computed farfield sound pressure levels of sources are based on a combination of sound power level data computed from close-in (nearfield) measurements and dimensions, and projections using farfield data.

Individual noise sources are modelled so that the relative contribution of sources can be determined and appropriate noise reductions be investigated. To satisfy both FERC's noise requirement at residences of Ldn of 55 dBA and PGT's efforts to be a good neighbor, noise controls are being developed for both existing Station 3 noise sources and planned expansion equipment.

The attached noise prediction model was developed using noise data collected during a noise survey at Station 3 in July 1990. Noise measurements were made of all the Station 3 noise sources. The predictions are based on the following commonly used noise prediction methods:

- Compute sound power of noise sources using nearfield sound pressure level measurements and source size using:

  Lw = Lp (in the nearfield) + 10 *LOG (Area)

  where,
  Lw = Sound Power Level, in dB
  Lp = Sound Pressure Level, in dB
  Area = Conformal surface area around the radiating surface in square meters

- Determine the farfield sound pressure level assuming point source hemispherical radiation of sound where:

  Lp (in the farfield) = Lw - 20 *LOG (Dist.) + 2.3 dB - Mol. Abs. (Dist.)
  - Directivity

  where,
  Dist. = Distance is in feet

Mol. Abs. = Molecular air absorption as a function of distance in feet
Directivity = Difference between sound pressure level in any given direction in the farfield and the average sound pressure level in that field.

- Attenuation of sound due to molecular air absorption was included using standard day absorption coefficients as contained in the Edison Electric Institute Electric Power Plant Environmental Noise Guide (EEI Guide).
- Directivity effects were computed using data from the EEI Guide and VDI 2714 (from Germany).
- All other effects (e.g.- ground effects, wind) which often lower predicted noise levels have been ignored.

On page 2 of the predictions (attached), the overall predicted noise level for existing station equipment is compared to a noise measurement made at the Stevens residence. Note that the predicted noise level is approximately 2 dB higher than was measured. It is believed that most of this conservatism is due to inherent inaccuracies in assessing directivity effects, and to the fact that ground effects are ignored. In addition, the above ground piping measurements were made near the sections of pipe with maximum noise levels, thereby resulting in a conservative assessment of the total noise radiated by the piping.

As can be seen, the model underpredicts noise at low frequencies. It is speculated that at the turbine exhaust stack outlet, there is significant upward radiation of low frequency noise which is partially undetected at the selected close-in measurement points but is refracted towards the ground at farfield positions. It is not practical to gather data directly above the exhaust stack, where the temperature of exhaust gases is about 700 degrees Fahrenheit.

The gas turbine air inlet noise level contained in the predictions is based on an actual measurement made at the Stevens residence. The tone was quantified by spectrum analysis of tape recordings. Note that the noise of the air inlet is less than the above ground piping noise. Above ground piping noise was calculated based on nearfield measurements made close to the piping. Broadband noise due to the gas turbine exhaust, flow in above ground piping, and radiation of compressor building noise sources through building openings tends to mask tonal noise.

NOISE PREDICTION MODEL OF EXISTING STATION 3 AND COMPARISON TO FIELD MEASUREMENTS

PGT PIPELINE EXPANSION
28-Feb-91 5:18:33 PM

NOTE TO USER: SHADED AREAS ON SPREADSHEET ARE FOR DATA INPUT

Lp = Sound Pressure Level
Lw = Sound Power Level
dB = Decibel
dBA = A-Weighted Decibel
DIA. = Diameter

RECEPTOR NAME:	RECEPTOR COORDINATES		
STEVENS RESIDENCE	X. 1000	Y. 260	Z. 0

OVERALL A-WEIGHTED SOURCE SOUND PRESSURE LEVEL PREDICTIONS AT RECEPTOR FROM EXISTING EQUIPMENT:

SOURCE:	DISTANCE (Feet)	dBA	PERCENTAGES
EXISTING UNIT A LUBE OIL FAN DISCHARGE	775	44.1	40.9
EXISTING ABOVE GROUND PIPING	576	43.2	33.3
UNIT A GAS TURBINE EXHAUST	775	39.8	15.3
UNIT A GAS TURBINE INLET	800	35.0	5.0
EXISTING VENT OPENING ON WEST SIDE	775	32.4	2.8
NOISE RADIATED THROUGH UNIT A BUILDING	775	28.9	1.2
EXISTING VENT FAN OPENING ON NORTH SIDE	775	29.7	1.5
PREDICTION TOTAL		47.8 dBA	

OCTAVE BAND SOURCE SOUND PRESSURE LEVEL PREDICTIONS AT RECEPTOR FROM EXISTING EQUIPMENT:

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A-WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
EXISTING UNIT A LUBE OIL FAN DISCHARGE	41.4	53.3	52.2	47.0	42.8	36.1	27.9	18.0	3.0	44.1
EXISTING ABOVE GROUND PIPING	0.0	0.0	0.0	0.0	23.1	34.6	39.7	36.6	21.1	43.2
UNIT A GAS TURBINE EXHAUST	64.9	57.6	48.8	38.8	35.3	31.9	29.5	25.5	12.9	39.6
UNIT A GAS TURBINE INLET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	35.0
EXISTING VENT OPENING ON WEST SIDE	34.5	41.3	39.2	34.1	31.8	24.2	17.9	17.1	0.0	32.4
NOISE RADIATED THROUGH UNIT A BUILDING	47.5	47.4	43.3	23.1	16.8	14.2	10.7	0.0	0.0	28.9
EXISTING VENT FAN OPENING ON NORTH SIDE	33.9	47.7	30.6	32.5	27.2	22.6	17.3	9.5	0.0	29.7
OVERALL TOTAL Lp @ RECEPTOR	65.0	59.8	54.4	46.0	43.9	39.5	40.4	38.9	21.7	47.9

COMPARISON OF PREDICTION TO MEASUREMENT:

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
OVERALL PREDICTED Lp @ RECEPTOR	65.0	59.8	54.4	46.0	43.9	39.5	40.4	38.9	21.7	47.9

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
ACTUAL MEASURED Lp @ RECEPTOR MEASUREMENT OF JULY 9,1990	71.0	62.0	48.0	43.0	42.0	40.0	38.0	36.0	26.0	46.1

NOTE THE ABOVE DATA IS BASED ON OCTAVE BAND NOISE DATA MEASURED IN THE STEVENS FRONT YARD. DATA IS AVERAGED OVER A PERIOD OF 60 SECONDS. NOISE MONITORING OVER A 24 HOUR PERIOD YIELDED A STATION NOISE LEVEL OF 45 TO 47 dBA WITH 46 dBA BEING THE TYPICAL NOISE LEVEL.

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
COMPARISON: PREDICTION TO MEASUREMENT	-6.0	-2.4	6.4	5.0	1.9	-0.5	2.4	2.9	-4.3	1.8

EXISTING ABOVE GROUND PIPING

SOURCE NAME:
EXISTING ABOVE GROUND [illegible]

USING DATA COLLECTED AT STATION 3, JULY 1990
NOTE: ABOVE GROUND PIPING NOISE IS HIGH FREQUENCY NOISE. NO LOW FREQUENCY DATA IS PRESENTED
(LOW FREQUENCY DATA NEAR PIPING IS DUE TO OTHER SOURCES.)

Lw PER METER OF PIPE.
Lw=Lp +10*LOG(AREA (meters^2))
AREA @ 6" FROM 36" PIPE= PI*DIA.*(1 meter)=3.14*(((36+12 inches)/12 inches/ft)*.3048 meter/ft)*1= 3.83 meter^2
Lw=Lp+10*LOG(3.83)=Lp+5.6

SOURCE COORDINATES (FEET)
X: 425 Y: 275 Z: 0

DISTANCE FROM SOURCE TO RECEPTOR (FT): 575.5

LENGTH OF ABOVE GROUND PIPING: 18 m

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
STATION 3 Lp @ 6 INCHES FROM PIPING	0.0	0.0	0.0	0.0	58.0	70.0	76.0	76.0	64.0	80.5
Lw=Lp+5.6	0.0	0.0	0.0	0.0	5.6	5.6	5.6	5.6	5.6	
Lw PER METER OF PIPE LENGTH	0.0	0.0	0.0	0.0	63.6	75.6	81.6	81.6	69.6	86.3
10*log(PIPE LENGTH (m))	0.0	0.0	0.0	0.0	12.6	12.6	12.6	12.6	12.6	
Lw ABOVE GROUND PIPING	0.0	0.0	0.0	0.0	76.4	88.4	94.4	94.4	82.4	98.9
-20*LOG(DISTANCE)+2.3	-52.9	-52.9	-52.9	-52.9	-52.9	-52.9	-52.9	-52.9	-52.9	
MOLECULAR ABSORPTION		-0.1	-0.1	-0.2	-0.4	-0.9	-1.8	-4.7	-8.5	
SHIELDING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lp @ STEVENS RESIDENCE	0.0	0.0	0.0	0.0	23.1	34.6	39.7	36.8	21.1	43.2
Lp IN A WTG'D OCTAVES	-39.0	-26.0	-16.0	-9.0	20.1	34.6	40.7	37.8	20.1	

EXISTING VENT FAN OPENING ON NORTH SIDE

SOURCE NAME
EXISTING VENT FAN OPENING ON NORTH SIDE

USING DATA COLLECTED AT STATION 3, JULY 1990
NOTE: NOISE GENERATED FROM WITH INSIDE THE BUILDING IS RADIATED FROM THIS OPENING

SOURCE COORDINATES (FEET)
X: 225 Y: 275 Z: 0
DISTANCE FROM SOURCE TO RECEPTOR (FT): 775.4

AREA OF OPENING: 1.7 m^2

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
STATION 3 Lp @ 6 INCHES FROM OPENING	89.0	104.0	88.0	92.0	89.0	87.0	85.0	83.0	79.0	92.8
10*log(AREA)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
Lw OPENING	81.3	106.3	90.3	94.3	91.3	89.3	87.3	85.3	81.3	95.1
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-8.4	-11.4	
SHIELDING BY BUILDING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DIRECTIVITY @ 90 degrees	-2.0	-3.0	-4.0	-6.0	-8.0	-10.0	-12.0	-14.0	-18.0	
Lp @ STEVENS RESIDENCE	33.9	47.7	30.6	32.5	27.2	22.6	17.3	8.5	0.0	29.7
Lp IN A WTG'D OCTAVES	-5.1	21.7	14.6	23.5	24.2	22.8	18.3	10.5	-1.0	

EXISTING UNIT A LUBE OIL FAN DISCHARGE

SOURCE NAME
EXISTING UNIT A LUBE OIL FAN DISCHARGE

USING DATA COLLECTED AT STATION 3, JULY 1990
NOTE MOST OF THE HIGH FREQUENCY NOISE IS DUE TO NOISE GENERATED FROM WITHIN THE BUILDING
MOST OF THE LOW FREQUENCY NOISE IS GENERATED BY THE LUBE OIL COOLER FAN

SOURCE COORDINATES (FEET)
X 225 Y 250 Z: 0

DISTANCE FROM SOURCE TO RECEPTOR (FT) 775.0

AREA OF AIR INLET 10 m^2

	OPTIONAL			OCTAVE BAND CENTER FREQUENCY (Hz)						A WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
STATION 3 Lp @ 6 INCHES FROM DISCHARGE	89.0	102.0	102.0	99.0	97.0	93.0	88.0	84.0	76.0	98.5
10*log(AREA)	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	
Lw OPENING	98.8	111.8	111.8	108.8	106.8	102.8	97.8	93.8	85.8	108.4
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
SHIELDING BY BUILDING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DIRECTIVITY @ 90 degrees	-2.0	-3.0	-4.0	-6.0	-8.0	-10.0	-12.0	-14.0	-16.0	
Lp @ STEVENS RESIDENCE	41.4	53.3	52.2	47.0	42.8	36.1	27.8	18.0	3.0	44.1
Lp IN A-WTG'D OCTAVES	2.4	27.3	36.2	38.0	39.8	36.1	28.8	19.0	2.0	

UNIT A GAS TURBINE EXHAUST

USING DATA COLLECTED AT STATION 3, JULY 1990
NOTE. Lw=Lp+10*log(AREA OF CONFORMAL SURFACE @ 1 METER FROM STACK)

AVERAGING OF FIELD NOISE DATA @ 1 METER FROM STACK

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A-WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
EXHAUST 1 m OUT, 1/2 m UP, NORTH SIDE	103.0	95.0	87.0	78.0	75.0	72.0	71.0	71.0	61.0	79.8
EXHAUST 1 m OUT, LEVEL w/STACK, NORTH	102.0	93.0	85.0	76.0	73.0	71.0	70.0	70.0	60.0	78.4
EXHAUST 1 m OUT, 1/2 m DOWN, NORTH SIDE	100.0	92.0	83.0	75.0	72.0	70.0	69.0	70.0	59.0	77.4
EXHAUST 1 m OUT, 1/2 m UP, EAST SIDE	103.0	96.0	88.0	78.0	74.0	71.0	70.0	70.0	66.0	79.5
EXHAUST 1 m OUT, LEVEL w/STACK, EAST	102.0	96.0	87.0	76.0	72.0	69.0	67.0	65.0	60.0	77.5
EXHAUST 1 m OUT, 1/2 m DOWN, EAST SIDE	101.0	95.0	85.0	72.0	70.0	66.0	65.0	61.0	54.0	75.3
AVERAGE Lp @ 1 METER	102.0	94.7	86.1	76.3	73.0	70.2	69.1	68.9	61.4	78.2

SOURCE NAME
UNIT A GAS TURBINE EXHAUST

USING DATA COLLECTED AT STATION 3, JULY 1990

SOURCE COORDINATES (FEET)
X. 825 Y. 275 Z: 0

DISTANCE FROM SOURCE TO RECEPTOR (FT) 775.4

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A-WTG
	31.6	63	125	250	500	1 k	2 k	4 k	8 k	dBA
Lp @ 1 METER FROM EXHAUST (Typical)	102.0	84.7	86.1	76.3	73.0	70.2	89.1	68.9	61.4	78.2
10*log(AREA OF CONFORMAL SURFACE)	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	
Lw EXHAUST	120.3	113.1	104.5	84.8	91.3	88.6	87.5	87.3	79.8	98.8
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
DIRECTIVITY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lp @ STEVENS RESIDENCE	84.9	57.6	48.9	38.8	35.3	31.9	29.5	25.5	12.9	39.8
Lp IN A-WTG'D OCTAVES	25.9	31.8	32.9	29.8	32.3	31.9	30.5	26.5	11.9	

UNIT A GAS TURBINE INLET

SOURCE NAME
UNIT A GAS TURBINE INLET, [illegible]

USING DATA COLLECTED AT STATION 3, JULY 1990.
FOR THE EXISTING AIR INLET, VIRTUALLY ALL OF THE AIR INLET NOISE IS DUE TO A PURE TONE @ 3400 Hz
ONLY DATA IN THE 4 k Hz OCTAVE BAND IS PRESENTED (NOISE IN OTHER BANDS DUE TO OTHER SOURCES)
SPECTRUM ANALYSIS OF TAPE RECORDINGS MADE AT THE STEVENS RESIDENCE SHOWED THE 3400 Hz TONE TO BE 35 dBA
THE FOLLOWING CALCULATIONS WERE ADJUSTED USING A "SHIELDING BY BUILDING" TERM SO THE RESULTS
MATCH THE ACTUAL MEASUREMENT

SOURCE COORDINATES (FEET)
X 200 Y 275 Z 0

DISTANCE FROM SOURCE TO RECEPTOR (FT) 800.4

AREA OF AIR INLET 5 m^2

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
Lp @ FACE OF AIR INLET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	106.0	0.0	107.0
10*log(AREA)	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	
10*LOG(2) (2 AIR INLETS)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lw AIR INLET	9.6	9.6	9.6	9.6	9.6	9.6	9.6	115.6	9.6	10.0
-20*LOG(DISTANCE)+2.3	-55.8	-55.6	-55.8	-55.8	-55.8	-55.6	-55.8	-55.8	-55.8	
MOLECULAR ABSORPTION		-0.1	-0.2	-0.3	-0.6	-1.3	-2.6	-6.6	-11.8	
SHIELDING BY BUILDING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-19.3	0.0	
DIRECTIVITY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lp @ STEVENS RESIDENCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	35.0
Lp IN A WTG'D OCTAVES	-39.0	-26.0	-16.0	-9.0	-3.0	0.0	1.0	35.0	-1.0	

NOISE RADIATED THROUGH UNIT A BUILDING

SOURCE NAME:
NOISE RADIATED THROUGH [redacted] ING

USING DATA COLLECTED AT [redacted] 3, JULY 1990

SOURCE COORDINATES (FEET)			DISTANCE FROM SOURCE TO RECEPTOR (FT)
X 225	Y 275	Z 0	775.4

AREA OF EAST WALL 67 m^2

EAST WALL	OPTIONAL 31.5	63	125	250	500	1 k	2 k	4 k	8 k	A WTG dBA
Lp @ INSIDE OF BUILDING WALL	84.0	90.0	83.0	67.0	87.0	81.0	95.0	95.0	90.0	100.2
-TL (24 GA.,6" GAP w/2" INS.,26 GA. PERF)	-6.0	-12.0	-19.0	-33.0	-39.0	-45.0	-51.0	-57.0	-60.0	
- 6	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	
10*log(AREA of EAST WALL (m^2))	18.3	18.3	18.3	18.3	18.3	18.3	16.3	16.3	18.3	
Lw EAST WALL	80.3	80.3	86.3	66.3	60.3	58.3	56.3	50.3	42.3	72.0
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
DIRECTIVITY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lp @ STEVENS RESIDENCE	34.8	34.7	30.6	10.5	4.2	1.5	-1.7	-11.6	-24.6	16.1
Lp IN A-WTG'D OCTAVES	-4.2	8.7	14.8	1.5	1.2	1.5	-0.7	-10.6	-25.6	

BUILDING NOISE (con't)

AREA OF
SOUTH WALL __1000__ m^2

SOUTH WALL	OPTIONAL 31.5	63	125	250	500	1 k	2 k	4 k	8 k	A WTG dBA
		OCTAVE BAND CENTER FREQUENCY (Hz)								
Lp @ INSIDE OF BUILDING WALL	64.0	90.0	93.0	87.0	87.0	91.0	95.0	95.0	90.0	100.2
-TL (24 GA.,6" GAP w/2" INS.,26 GA. PERF)	-6.0	-12.0	-19.0	-33.0	-39.0	-45.0	-51.0	-57.0	-60.0	
- 6	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	
10*log(AREA of SOUTH WALL (m^2))	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	
Lw SOUTH WALL	102.0	102.0	96.0	76.0	72.0	70.0	66.0	62.0	54.0	63.7
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
DIRECTIVITY	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.0	
Lp @ STEVENS RESIDENCE	41.5	41.4	37.3	17.2	10.9	6.3	5.0	-4.6	17.9	22.9
Lp IN A-WTG'D OCTAVES	2.5	15.4	21.3	6.2	7.9	8.3	6.0	-3.6	-16.9	

AREA OF
WEST WALL: __725__ m^2

WEST WALL	OPTIONAL 31.5	63	125	250	600	1 k	2 k	4 k	6 k	A WTG dBA
		OCTAVE BAND CENTER FREQUENCY (Hz)								
Lp @ INSIDE OF BUILDING WALL	64.0	90.0	93.0	67.0	67.0	91.0	95.0	95.0	90.0	100.2
-TL (24 GA.,6" GAP w/2" INS.,26 GA. PERF)	-6.0	-12.0	-16.0	-33.0	-39.0	-45.0	-51.0	-57.0	-60.0	
- 6	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	
10*log(AREA of WEST WALL (m^2))	28.6	26.6	28.8	26.6	26.6	26.6	26.6	26.6	28.6	
Lw WEST WALL	100.6	100.6	66.6	76.8	70.6	66.6	66.6	60.6	52.6	62.3
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
DIRECTIVITY	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	
Lp @ STEVENS RESIDENCE	25.2	25.0	20.6	0.6	-5.5	-6.1	-11.4	-21.2	-34.3	6.1
Lp IN A-WTG'D OCTAVES	-13.6	-1.0	4.9	-8.2	-8.5	-8.1	-10.4	-20.2	-35.3	

BUILDING NOISE (con't)

AREA OF
NORTH WALL 1000 m^2

NORTH WALL	OPTIONAL 31.5	63	125	250	500	1 k	2 k	4 k	8 k	A-WTG dBA
Lp @ INSIDE OF BUILDING WALL	84.0	90.0	93.0	87.0	87.0	91.0	95.0	95.0	90.0	100.2
-TL (24 GA.,6" GAP w/2" INS.,26 GA. PERF)	-6.0	-12.0	-19.0	-33.0	-39.0	-45.0	-51.0	-57.0	-60.0	
- 6	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	
10*log(AREA of NORTH WALL (m^2))	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	
Lw NORTH WALL	102.0	102.0	98.0	78.0	72.0	70.0	68.0	62.0	54.0	83.7
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
DIRECTIVITY	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	
Lp @ STEVENS RESIDENCE	41.5	41.4	37.3	17.2	10.9	8.3	5.0	-4.8	-17.9	22.9
Lp IN A-WTG'D OCTAVES	2.5	15.4	21.3	8.2	7.9	8.3	6.0	-3.8	-18.9	

AREA OF
ROOF 1984 m^2

ROOF	OPTIONAL 31.5	63	125	250	500	1 k	2 k	4 k	8 k	A-WTG dBA
Lp @ INSIDE OF BUILDING WALL	84.0	90.0	93.0	87.0	87.0	91.0	95.0	95.0	90.0	100.2
-TL (24 GA.,6" GAP w/2" INS.,26 GA. PERF)	-6.0	-12.0	-19.0	-33.0	-39.0	-45.0	-51.0	-57.0	-60.0	
- 6	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	
10*log(AREA of ROOF (m^2))	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	
Lw ROOF	104.3	104.3	100.3	80.3	74.3	72.3	70.3	64.3	56.3	86.0
-20*LOG(DISTANCE)+2.3	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	-55.5	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
DIRECTIVITY	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	
Lp @ STEVENS RESIDENCE	43.8	43.7	39.6	19.4	13.2	10.5	7.3	-2.6	-15.6	25.2
Lp IN A-WTG'D OCTAVES	4.8	17.7	23.6	10.4	10.2	10.5	8.3	-1.6	-16.6	

BUILDING NOISE (con't)

BUILDING SUMMARY	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A-WTG
	31.5	63	125	250	500	1 k	2 k	4 k	8 k	dBA
Lp @ STEVENS- EAST WALL	34.8	34.7	30.6	10.5	4.2	1.5	-1.7	-11.6	-24.6	18.1
Lp @ STEVENS- SOUTH WALL	41.5	41.4	37.3	17.2	10.9	8.3	5.0	-4.8	-17.9	22.9
Lp @ STEVENS- WEST WALL	25.2	25.0	20.9	0.8	-5.5	-8.1	-11.4	-21.2	-34.3	6.1
Lp @ STEVENS- NORTH WALL	41.5	41.4	37.3	17.2	10.9	8.3	5.0	-4.8	-17.9	22.9
Lp @ STEVENS- ROOF	43.8	43.7	39.6	19.4	13.2	10.5	7.3	-2.6	-15.6	25.2
Lp @ STEVENS RESIDENCE	47.5	47.4	43.3	23.1	16.8	14.2	10.7	0.0	0.0	28.9
Lp IN A-WTG'D OCTAVES	8.5	21.4	27.3	14.1	13.8	14.2	11.7	1.0	-1.0	

EXISTING VENT OPENING ON WEST SIDE

SOURCE NAME
EXISTING VENT OPENING ON WEST SIDE

USING DATA COLLECTED AT STATION 3

SOURCE COORDINATES (FEET)
X 825 Y 275 Z 0

DISTANCE FROM SOURCE TO RECEPTOR (FT) 775.4

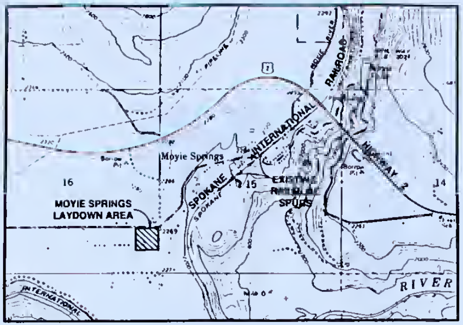
AREA OF OPENING 2.0 m^2

	OPTIONAL	OCTAVE BAND CENTER FREQUENCY (Hz)								A WTG
	31.6	63	125	250	500	1 k	2 k	4 k	8 k	dBA
Lp @ 6 INCHES	89.0	97.0	96.0	93.0	93.0	88.0	85.0	90.0	77.0	95.7
10*log(AREA)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Lw OPENING	91.9	99.9	98.9	95.9	95.9	90.9	87.9	92.9	79.9	98.6
-20*LOG(DISTANCE)+2.3	-55.49	-55.49	-55.49	-55.49	-55.49	-55.49	55.49	-55.49	55.49	
MOLECULAR ABSORPTION	0.0	-0.1	-0.2	-0.3	-0.6	-1.2	-2.5	-6.4	-11.4	
SHIELDING BY BUILDING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DIRECTIVITY	-2.0	-3.0	-4.0	-6.0	-6.0	-10.0	-12.0	-14.0	-16.0	
Lp @ STEVENS RESIDENCE	34.5	41.3	39.2	34.1	31.8	24.2	17.9	17.1	0.0	32.4
Lp IN A-WTG'D OCTAVES	-4.5	15.3	23.2	25.1	28.8	24.2	18.9	18.1	-1.0	

RESPONSE TO FERC MITIGATION

MEASURE #39

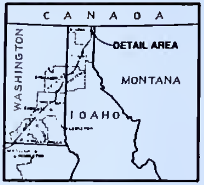
Attachment D



T 62N R.2E. B.B &M.
Moyie Springs Quad.

north

1 inch = 2,000 feet

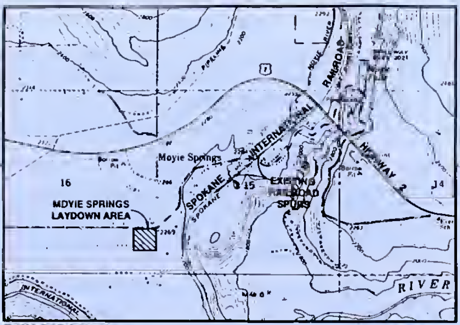


VICINITY MAP

The Moyie Springs laydown site is approximately 7 acres in size. The land use is rangeland/grazing. The site is undeveloped and has never been cultivated. No wetlands are present according to the USGS National Wetland Inventory. Additional studies will be performed to determine if wetlands exist. Field studies for cultural, rare plant and wildlife resources studies will be performed in 1991.

PGT-PG&E PIPELINE
EXPANSION PROJECT

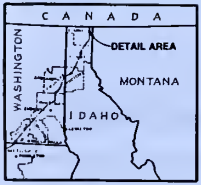
MOYIE SPRINGS LAYDOWN AREA
Boundary County, Idaho



T.62N. R.2E. B.B.&M.
Moyie Springs Quad.

north

1 inch = 2,000 feet



VICINITY MAP

The Moyie Springs laydown site is approximately 7 acres in size. The land use is rangeland/grazing. The site is undeveloped and has never been cultivated. No wetlands are present according to the USGS National Wetland Inventory. Additional studies will be performed to determine if wetlands exist. Field studies for cultural, rare plant and wildlife resources studies will be performed in 1991.

PGT-PG&E PIPELINE
EXPANSION PROJECT

MOYIE SPRINGS LAYDOWN AREA
Boundary County, Idaho

PG-50

RESPONSE TO FERC MITIGATION

MEASURE #44

Attachment E

Construction and Restoration Plan

Volcanic Rock Intrusion Areas
Central Oregon

Prepared by
PGT-PG&E Pipeline Expansion Project
for the
Federal Energy Regulatory Commission

February 1991

INTRODUCTION

This report was prepared in response to the Federal Energy Regulatory Commission's (FERC) Staff Recommended Mitigation Measures, Item 44, of the *PGT/PG&E and Altamont Natural Gas Pipeline Projects Draft Environmental Impact Statement*. The report provides specific construction, restoration, and revegetation measures to be implemented in areas containing volcanic rock intrusions. Terrain characterized by volcanic rock intrusions present unique conditions for construction and restoration. Of particular concern is the disposal of rock generated from trenching.

I. Study Area

The PGT-PG&E Pipeline Expansion Project right-of-way crosses through areas containing significant near-surface volcanic rock in portions of central and southern Oregon. These conditions are most likely to occur between M.P. 433.5 and M.P. 472 (see Figures 1 and 2). In two milepost intervals within this distance (M.P. 461.4-463 and M.P. 468.3-469.8), however, the volcanic rock appears to be covered with thicker soil. The volcanic rock intrusions occur primarily in the High Lava Plains physiographic province.

II. Environmental Setting

Topography/Geology

The High Lava Plains physiographic province is characterized by extensive volcanic flow rocks, ash deposit and cinder cones of young geologic age, originating from Cascade volcanic centers. Newberry Volcano, southeast of Bend, is the source of most of the lava in the pipeline vicinity, along with other local vents such as Pilot Butte and Lava Butte. The lava rock consists of tough, hard, often vesicular basalt and some andesite. The lava flows form gently sloped terrain with areas of scant soil. Most of the soil has been derived from ash deposits which are mixed with minor products of the lava's weathering. In the southern portion of the pipeline right-of-way in this province (south of M.P. 472), the terrain is more rolling and the lava flows are covered with a veneer of ash derived from the eruption of the Crater Lake caldera, some 6,000 years ago. The ash deposits are only a few inches thick north of M.P. 472, but extend to several tens of feet as the right-of-way proceeds south.

Wildlife/Vegetation

The pipeline right-of-way in the High Lava Plains supports sparse vegetation comprising lodgepole pine forest, juniper woodland, and ponderosa pine forest. Limited amounts of sagebrush-steppe, mixed conifer forest, and agriculture are interspersed among the dominant vegetation types. One special status plant species, diamond petaled California poppy (Secondary federal candidate) has a known

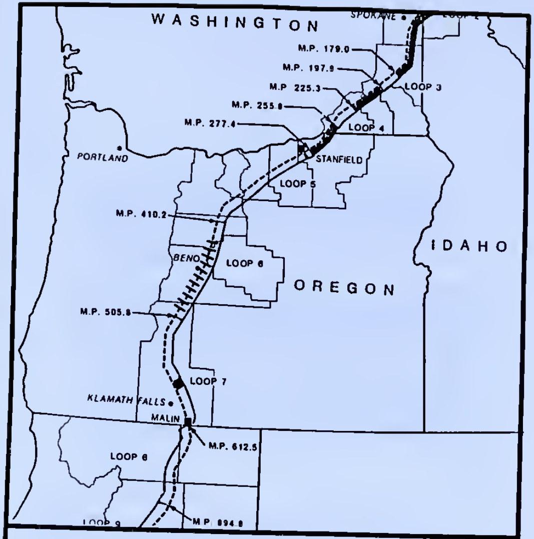


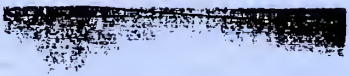
Figure 1

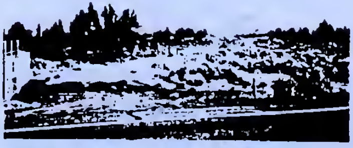
Vicinity Map

Volcanic Rock Intrusion Areas
Central Oregon

▨ VOLCANIC ROCK AREA

M.P. 438.3 Highway 136 crossing, east of Redmond, Oregon, looking south.





M.P. 438.3 North Valve Station on Highway 126, east of Redmond, Oregon, looking north.

Figure 2

Photo Date: Sept. 1981

Typical Landscape

Volcanic Rock Intrusion Areas
Central Oregon

occurrence within this region. No populations were observed in or near the right-of-way during PGT-PG&E's 1990 survey for special status plant species.

The High Lava Plains province supports a large number of wildlife species (see DEIS, Section 3E for species list). Three threstened or endangered species have known occurrences in the vicinity of the right-of-way: the spotted frog (Oregon threstened), bald esgle (Federal and Oregon threatened), and peregrine falcon (Federal endangered). Four other species, all candidate species for federal listing, have the potential to occur in the right-of-way vicinity within this province. These include: Swainson's hawk, Ferruginous hawk, greater sandhill crane, and California wolverine. None of these species were observed during PGT-PG&E's survey for special status wildlife in the vicinity of the right-of-way.

Land Use

Very little agriculture is found along the proposed route through the High Lava Plains province. The land is primarily forested. Most of the agriculture in the project vicinity is close to Bend, Oregon (M.P.'s 450 to 457). Some range and pasture is interspersed in the juniper forest land north of Bend, and some of the pine forest south of Bend allows seasonal grazing. Some urban land would be affected, primarily in the areas near Bend and La Pine. Three houses and a trailer are within 50 feet of the edge of the proposed permanent right-of-way.

Land ownership along the right-of-way through the High Lava Plains province consists primarily of federal Bureau of Land Management (BLM) and Deschutes National Forest, along with sporadic private ownership.

III. Construction Procedures

The standard construction procedures outlined in the DEIS, Section 2.2, "General Construction, Operation and Maintenance Procedures," will be used for construction in areas with volcanic rock. As detailed in the DEIS, these procedures generally include surveying, clearing and grading the right-of-way and temporary work areas, excavating and preparing pipeline trenches, installing the pipe, backfilling, marking the pipeline location, and restoring the right-of-way.

Trenching through rocky areas will be done with tractor-mounted mechanical rippers and with blasting. When blasting is necessary, advanced notice will be provided to property owners and flaggers will be posted to protect the public. Blasting mats will be used to prevent damage to adjacent structures, as necessary. In addition, smaller blasting charges, placed closer together, will be used to minimize noise and flyrock near residences. Backhoes will dig out the trench after blasting.

Once the trench is established, a padding of sand will be placed along the bottom of the trench. The pipe will then be installed and padding material placed around the sides and top of the pipe. Some of the material excavated from the trench will be used as backfill over the padding material. As discussed below, however, it is anticipated that a large amount of rock may have to be hauled away from the right-of-way to disposal sites.

Construction in the volcanic rock areas of Oregon is scheduled to occur during 1992 and 1993.

IV. Restoration

Restoration of areas characterized by rock and volcanic intrusions will include both rock disposal and revegetation. The goal of the restoration plan is to establish native vegetation which blends in with disturbed areas where rock has been removed, buried, or left in place. A combination of native rock, soil and vegetation is the most desirable treatment for the area in regard to long-term erosion protection and aesthetic quality.

Rock Disposal

Rock disposal will include disposal of excess rock excavated as part of the Expansion Project, as well as the disposal of rocks left in windrows along the side of the right-of-way following the original pipeline construction (in the early 1960's). Two methods of rock disposal are likely to be used:

1. Rock will be hauled to designated disposal sites, including abandoned quarries, rock sale yards and construction sites. PGT is currently in the process of working with the Bureau of Land Management to identify acceptable disposal sites.
2. Rock will be scattered throughout the right-of-way to approximate natural terrains.

Revegetation

Revegetation will consist of broadcast seeding of native species or adapted endemic species, as well as species recommended by local regulatory agencies. With most site conditions, the preferred method of seeding is to prepare the seedbed by scarifying the soil, broadcasting the seed, raking in seed, fertilizing and lightly mulching to enhance germination.

The key elements to successful seeding in volcanic rock intrusion areas are:

o Proper timing of seeding: Seeding will be applied immediately following final grading. If final grading is complete in late summer or early spring, only one seed application will be required. If grading is completed earlier in the year, a second seed application will be conducted in late summer or early fall, prior to the first rainfall.

- Preparing the seed bed: Because of the limited topsoil in volcanic rock intrusion areas, only the top three to four inches of the "A" horizon will be segregated and replaced during the final grading operations (as feasible). The top dressing operation will not only provide a desirable seedbed, but should provide viable seeds that exist in the native topsoil. (While the use of the top three to four inches of topsoil differs from the FERC recommendation in the DEIS, this practice was recommended by the BLM staff in Prineville.)

- Seeding: Native seed will be used whenever commercially available or if native straw seeding is feasible. Native straw seeding involves harvesting native stands of grasses and other herbaceous species, including the seed head inflorescents and other plant parts. No attempt is made to separate the seed from the "straw". The harvested material is uniformly dispersed over the area to be seeded at an application ratio of 1:2 or 1:3 (material harvested from one acre will be dispersed over two to three acres).

  If native seeding is not feasible, the commercially available seed mixes recommended by the FERC will be used. (See seed specifications, Table 1 attached)

- Fertilization: The fertilizer application will consist of Ammonium phosphate sulfate, (16-20-0) applied at 375 pounds per acre. Fertilizer will be uniformly applied at the time of seeding. This application will be used unless otherwise requested by local land management agencies.

- Mulching: Mulching will be applied after seeds are raked or dragged into the soil. The recommended application is 1000 pounds per acre applied uniformly on the soil surface. The most desirable species is locally grown hay of species that can be grown without irrigation.

Table I
Recommended Seed Mixes

In areas with 8-12 inches precipitation:

Species	Pure live seed pounds/acre
Siberian wheatgrass	2.5
Bluebunch wheatgrass	2.5
Magnar Basin wildrye	2.5
Alkar or Jose tall wheatgrass	2.5

In areas with 12-18 inches precipitation:

Species	Pure live seed pounds/acre
Greenar or Oahe Intermediate wheatgrass	2.5
Secar bluebunch wheatgrass	2.5
Luna pubescent wheatgrass	2.5
Paiute orchardgrass	2.5
Yellow sweetclover	0.5
Apar Lewis flax	0.25

Notes:

On BLM lands, local staff has recommended seeding with grasses present in the area, included crested wheatgrass, Idaho fescue, pubescent and intermediate wheatgrass and indian rice grass.

In areas where woody plant species are dominant, the following seed species will be added to the seed mix: bitterbrush, big sagebrush, low sagebrush, curlleaf mountain-mahogany, winter currant, and rabbitbrush.

Intervenors Comments

INTERVENORS

IN1 Kern River Gas Transmission Company IN-1

IN2 Southern California Gas, Pacific Interstate Transmission Company IN-12

FILED
OF THE SECRETARY
4 31

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Pacific Gas Transmission Company) Docket No. CP89-460-001

Altamont Gas Transmission Company) Docket No. CP90-1375-000

COMMENTS OF
KERN RIVER GAS TRANSMISSION COMPANY
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Kern River Gas Transmission Company ("Kern River") hereby submits its comments on the "PGT/PG&E and Altamont Natural Gas Projects Draft Environmental Impact Statement" ("DEIS") pursuant to the Notice of Availability of the DEIS issued by the Secretary of the Federal Energy Regulatory Commission ("Commission") on January 11, 1991. Kern River's comments will focus on the portion of the DEIS pertaining to system alternatives, more particularly how the DEIS has incorrectly identified and evaluated the alternatives to the projects.

I.

INTRODUCTION

The potential environmental impacts of the PGT/PG&E and Altamont Projects must be assessed in accordance with the mandates of the National Environmental Policy Act of 1969 ("NEPA") and the implementing regulations of the Council on Environmental Quality ("CEQR") (40 C.F.R. §§ 1500-1508). An EIS prepared for NEPA compliance is to provide a full and fair discussion of significant environmental impacts and [to] inform decisionmakers and the public of the reasonable *alternatives* which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. In this regard, the section of the EIS addressing alternatives to the proposed project is considered to be the "heart of the EIS." 40 C.F.R. § 1502.14. Thus, the regulations require that the agency charged with preparing the EIS "rigorously explore and objectively evaluate all *reasonable alternatives*" and "identify the agency's *preferred alternative* or alternatives, if one or more exists, in the draft statement." 40 C.F.R. § 1502.14(a) and (e). The DEIS fails to meet these standards.

II.

THE DEIS HAS NOT IDENTIFIED REASONABLE ALTERNATIVES TO THE PGT/PG&E PROJECT.

The DEIS indicates that ten projects were initially considered as alternatives to the PGT/PG&E and Altamont Projects. On the basis of the below listed criteria, all but four projects were eliminated from consideration:

(a) Alternative systems must provide most or all of the proposed long-term 700-755 MMcf/d of natural gas to California;

(b) Interstate pipeline alternatives must have filed an application for a certificate of public convenience and necessity with [the Commission] and said application must not be one that has been dismissed by [the Commission]; and

(c) Alternatives must not involve proceedings which are considered inactive or effectively in abeyance.

The elimination of the six projects from the original group of ten was done mainly on the basis of the projects never having filed completed certificate applications with the Commission or having such certificate applications dismissed. The remaining projects -- (1) the Mojave Pipeline Project; (2) the Kern River Pipeline Project; (3) the Joint Mojave-Kern River Project; and (4) the WyCal I and II Projects -- were then deemed viable alternatives. IN1-1 This list is deficient in its failure to treat Altamont and PGT/PG&E as alternatives to each other and in its inclusion of other projects which can not be viewed as "reasonable" alternatives.

A. The DEIS has not Identified the Altamont Project as a Reasonable Alternative to the PGT/PG&E Project.

IN1-2 The DEIS identified what it considered to be four alternatives to the PGT/PG&E and Altamont Projects. In doing so, it failed to identify the two principal projects as alternatives to each other. Comparison of the Altamont and PGT/PG&E Projects reveals that each certainly is a "reasonable alternative" to the other.

The PGT/PG&E Project is designed to transport 903 MMcf/d of natural gas that originates in the provinces of Alberta and British Columbia, 755 MMcf/d of which will be delivered to markets in northern and southern California. [1] More specifically, the gas transported on the PGT/PG&E Project will be delivered to municipalities, utilities and non-

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[1] The remaining 148 MMcf/d would be delivered to four natural gas utilities in the Pacific Northwest.

IN1-1 We disagree. See response to Altamont's comments.

IN1-2 See previous response.

utility shippers. Given that the PGT/PG&E Project has yet to receive all necessary regulatory authorizations, it will be 1994, at the earliest, before the project can hope to commence operation.

Comparatively, Altamont has proposed to construct a pipeline, with a design capacity of approximately 719 MMcf/d, from the U.S. - Canadian border near Wild Horse, Montana for interconnection with the Kern River facilities near Opal, Wyoming. The gas, which will originate primarily in Canada, will then be transported through the Kern River system (which will be expanded to accommodate the Altamont volumes) to southern California for delivery to LDCs, industrial gas users, power generation facilities and enhanced oil recovery ("EOR") operations. In other words, the Altamont Project, like PGT/PG&E, will deliver approximately 700 MMcf/d of natural gas to southern California to service the same markets that PGT/PG&E have targeted there. Moreover, like PGT/PG&E, Altamont has not yet obtained all necessary regulatory approvals, and therefore, will realistically begin servicing those markets at the same time as PGT/PG&E, 1994.

IN1-3 In addition to the Projects' easily recognizable similarities, the DEIS overlooks that Altamont has promoted itself as an alternative to PGT/PG&E. In its amended certificate application, Altamont states that its project may serve some of the same markets and customers that PGT has proposed to serve." Altamont Amended Application - Attachment

IN1-3 We have no control over how either applicant promotes its project. The fact remains that the two are not competing alternatives.

23 at 3. Altamont listed certain shippers on the PGT/PG&E Project and stated that it, or one of its shippers, could meet their needs. _Id_. Similarly, Altamont has depicted its project as "represent[ing] a competitive, mutually exclusive alternative" to the PGT/PG&E Project. _See_ Motion of Altamont Gas Transmission Company for Clarification, or, in the Alternative, Request for Rehearing, Docket No. CP89-1851, _et al_. (May 15, 1990).

IN1-4 The fact that the Altamont and PGT/PG&E Projects plan, to a large extent, to serve the same markets, at the same time, with gas supplies originating for the most part in Canada, makes them "reasonable alternatives" to one another. This conclusion is buttressed by the fact that Altamont has clearly presented itself as an alternative to the PGT/PG&E Project. The DEIS erred in its failure to treat the projects as such.

B. The DEIS Identifies Alternative Projects which are not in Fact Reasonable Alternatives to PGT/PG&E or Altamont.

The DEIS incorrectly identifies the "stand alone" Kern River pipeline and Mojave Pipeline Project, as well as the Joint Mojave - Kern River Project ("Joint Project"), as reasonable alternatives to the PGT/PG&E and Altamont projects.
IN1-5 The likelihood that either the Kern River or Mojave pipelines ever will exist as a separate entity is negligible. Moreover, the Joint Project itself is not a reasonable alternative to PGT/PG&E or Altamont.

IN1-4 See response to comment 1 above.

IN1-5 Thank you for your comments.

The Kern River Pipeline Project, originating at Opal, Wyoming, was designed to transport 700 MMcf/d of natural gas, produced predominantly in the Rocky Mountain region, to service EOR and related cogeneration requirements in Kern County, California. A certificate application for the project was filed with the Commission in 1985. This certificate has yet to be granted.

Also in 1985, Mojave Pipeline Company requested certificate authorization to construct a pipeline to service the Kern County EOR operations. In May 1989, in response to an additional application by Mojave, the Commission issued an optional certificate for Mojave to construct a pipeline from western Arizona to Kern County, to transport 400 to 600 MMcf/d of natural gas to be supplied by Transwestern and El Paso.

The Joint Project, the result of a settlement agreement among Kern River, Mojave and Southern California Gas Company, received certificate authorization in January 1990. In pursuit of the project, Kern River is presently constructing its pipeline from Opal, Wyoming to Daggett, California, where it will interconnect with the Mojave pipeline. An additional 225 miles of pipeline will extend from Daggett to the Bakersfield area in Kern County. This segment of the pipeline (and related facilities) will be constructed by Mojave, but jointly owned by Kern River and Mojave ("joint facilities"). Kern River began construction on its portion of the Joint Project in January 1991. Mojave plans to begin its construction in April 1991.

Construction of the Joint Project makes it highly unlikely that either Kern River or Mojave will proceed with its stand alone project. The only reason that would compel either company to pursue its original project is if the other refused to construct its portion of the Joint Project. There is no reason to believe, at this late date, that this will occur. Thus the DEIS' presentation of the separate Kern River and Mojave projects as "reasonable alternatives" to the PGT/PG&E and Altamont Projects is clearly erroneous.

INI-6 The next question is whether the Joint Project can be viewed as a "reasonable alternative" to PGT/PG&E. The answer is "no." The Joint Project is designed to serve different markets, from different supply sources, in a different time frame, than the PGT/PG&E Project.

The Joint Project will receive its natural gas supplies primarily from the Rocky Mountain and southwest regions. Its principal market will be the Kern County EOR market --a market which is untapped by the PGT/PG&E Project. A comparison of the projects' customer lists confirms that they will serve different markets -- there is virtually no duplication of customers. Moreover, the Joint Project is scheduled to go into service in early 1992, a readily achievable target as it is already under construction. This contrasts sharply with PGT/PG&E's likely in-service date of

INI-6 See previous response.

early 1994 or later. Thus, with different supply sources, different markets, and different project in-service dates, the Joint Project cannot be viewed as a "reasonable alternative" to the PGT/PG&E Project

In addition, it should be noted that the DEIS, by utilizing a project's ability to deliver 700-755 MMcf/d as a "screening criteria", discounts the findings of the California Public Utilities Commission that an additional 900 MMcf/d of natural gas services will be needed in California by 1995 and a total of between 1600 and 2100 MMcf/d by 2005. The capacity provided by the Joint Project and the already-approved SoCal Gas/El Paso southern system expansion substantially exceed this projected need. PGT/PG&E, therefore, must be viewed as a potential means of meeting California's longer-term requirements. This is yet another indication that the Joint Project is not an alternative to the PGT/PG&E project, but complementary to it.

III.

THE DEIS ERRONEOUSLY FAILS TO IDENTIFY A PREFERRED SYSTEM ALTERNATIVE.

IN1-7 The DEIS sets forth what it considers to be four reasonable alternatives to the PGT/PG&E and Altamont Projects. Each alternative project is discussed briefly, with detailed reference given to the EIS previously prepared on each one. The DEIS never, however, selects a preferred alternative.

It could be argued that the four projects singled out from the initial group of ten are the "preferred

IN1-7 Comment noted. See response to comment Number AL1-21.

alternatives." Such reasoning is questionable. First, the DEIS did not present the four projects as "preferred alternatives" but merely as the four projects that had passed the initial screening criteria. Moreover, logic dictates that a "preferred alternative" must come from among a group of "reasonable alternatives" (i.e. elimination of the six "unreasonable alternatives" was necessary to obtain a group from which a "preferred alternative" could be selected). By failing to identify a preferred alternative from among the PGT/PG&E and Altamont Projects and alternative to these projects, the DEIS is not in compliance with the CEQ regulations.

IN1-8 It is vital that this error be remedied in the Final EIS. Selection of a preferred alternative from a reconstituted list of reasonable alternatives (i.e. a list which includes the Altamont Project and excludes the Kern River, Mojave, and Joint Projects) will play a crucial role in the Commission's review of the PGT/PG&E Project. If the Altamont Project or some other alternative is selected as environmentally preferable to PGT/PG&E, that conclusion will have to enter into the Commission's consideration of PGT's certificate application. The availability of a less damaging alternative could persuade the Commission to deny PGT's application.

IN1-8 See response to comment AL1-21.

IV.

CONCLUSION

IN1-9 While the DEIS attempts to identify system alternatives to the PGT/PG&E and Altamont Projects, it is, as illustrated above, deficient in this regard. To remedy this deficiency, Kern River requests that the following additional modifications be made to final EIS: (1) recognition of the Altamont Project as an alternative to the PGT/PG&E Project, including in the EIS sufficient comparative materials; (2) exclusion of the Kern River Pipeline and the Mojave Pipeline, either as stand alone projects or as part of the Joint Project, from the list of reasonable alternatives to the PGT/PG&E and Altamont Projects; and (3) selection of a preferred alternative from the newly compiled list of alternatives.

Respectfully submitted,

Jeanne M. Bennett

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Attorneys for
Kern River Gas Transmission Company

March 4, 1991
1012-009.57-

IN1-9 Thank you for your comments. See previous responses.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 4th day of March, 1991.

Jeanne M. Bennett

Jeanne M. Bennett

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Of Counsel for

Kern River Gas Transmission Company

Pacific Enterprises

IN-12

[Southern California Gas, Pacific Interstate Transmission Company]

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FEDERAL ENERGY
REGULATORY COMMISSION

March 4, 1991

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ENVIRONMENTAL COMPLIANCE AND PROJECT
ANALYSIS BRANCH

Ms. Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 N. Capitol Street, N.E.
Washington, D.C. 20426

Re: Pacific Interstate Transmission Company
Docket No. CP89-460-001;
Altamont Gas Transmission Company
Docket No. CP90-1375-000

Dear Ms. Cashell:

Enclosed for filing, please find the original and fourteen (14) copies of the Joint Comments of Southern California Gas Company and Pacific Interstate Transmission Company Regarding the Draft Environmental Impact Statement Regarding the PGT/PG&E and Altamont Natural Gas Pipeline Projects in the above-referenced proceeding. An additional copy is enclosed which I request that you date stamp and return to bearer.

Thank you.

Very truly yours,

Michael A. Cartelli

Michael A. Cartelli
Attorney for
Southern California Gas
Company

MAC:zso
Enclosures

cc: All Parties of Interest

PO Box 60043
Los Angeles, CA 90060-0043
FAX 213-629-1225

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Pacific Gas Transmission Company	)	Docket No. CP89-460-001
	)	
Altamont Gas Transmission Company	)	Docket No. CP90-1375-000

JOINT COMMENTS OF SOUTHERN CALIFORNIA GAS COMPANY AND PACIFIC INTERSTATE TRANSMISSION COMPANY REGARDING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT OR THE PGT/PG&E AND ALTAMONT NATURAL GAS PIPELINE PROJECTS

Pursuant to the "Notice of Availability of the Draft Environmental Impact Statement of the PGT/PG&E Expansion - Altamont Natural Gas Pipeline Projects and Preliminary Notification of Schedule for Public Meetings to Receive Comments on the DEIS" issued in the above dockets on or about January 11,. 1991, Southern California Gas Company ("SoCalGas") and Pacific Interstate Transmission Company ("PITCO"), hereby file these Joint Comments:

1. The Draft Environmental Impact Statement ("DEIS") errs at pages S-2 and 2-15 where it states "Of the remaining 655 MMcf/d contracted by southern California entities [on the PGT/PG&E Expansion], approximately 30 MMcf/d would be delivered to municipalities, 300 MMcf/d would be delivered to

IN2-1 two utilities (San Diego Gas and Electric Company . . . and Southern California Gas Company . . .), and the remainder would be delivered to nonutility shippers." While the PGT/PG&E Expansion Project will deliver volumes to the SoCalGas system, those volumes have been contracted for by other parties, not SoCalGas. The utilities referred to in the language cited above should be San Diego Gas and Electric Company and Southern California Edison Company.

IN2-2 2. SoCalGas and PITCO take this opportunity to point out that the DEIR fails to indicate which of these alternative projects would be preferable from an environmental standpoint. SoCalGas and PITCO believe that the basic reason for a joint DEIR evaluating both of these proposals is so that such a conclusion could be drawn and further believe that such a comparison should be drawn. The failure of the DEIR to do so is, at the very least, inconsistent with the intent of the FERC at the outset of these dockets when these projects were originally paired and may, in fact, be an abdication of FERC's legal responsibility to draw such a comparison.

IN2-1 Thank you for this information. Please see revised Executive Summary and Chapter 2.

IN2-2 The staff disagrees with this comment. As indicated in Chapter 1, the decision to include both the altamont and PGT/PG&E Projects in a single EIS was based on administrative convenience, and not because the FERC on its staff determined that these projects were true alternatives to each other. Indeed, the FERC noted in its "Preliminary Determination of Nonenvironmental Issues" ont he Pacific Gas Transmission Company, issued January 22, 1991, that it is "not established that Altamont and PGT will serve the same market" (see page 42). Absent a finding by the FERC that the Altamont and PGT Projects serve the same markets and are in fact competitive with and/or alternatives to each other, it makes little sense for the staff's EIS to treat the projects as competing alternatives to each other. Also see response to comment AL1-21.

Respectfully submitted,

SOUTHERN CALIFORNIA GAS COMPANY

By: Michael A. Cartelli
Michael A. Cartelli

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Dated: March 4, 1991

IN-16

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Los Angeles, California this 4th day of March, 1991.

Michael A. Cartell

Michael A. Cartelli

Attorney for
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ATTACHMENT A

1990 CALIFORNIA GAS REPORT*

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* Due to the size of this Attachment, it is not being reproduced in the FEIS but is available for review at the FERC.

Summaries of Public Meeting Transcripts

RESPONSES TO COMMENTS IN ALTAMONT AND PGT PUBLIC MEETING TRANSCRIPTS

To reduce printing costs, the transcripts of the four local public meetings to receive comments on the DEIS are not being reproduced in the FEIS.

The vast majority of the comments received at the public meetings are presented as written comments in the previous sections. Where a commenter departed from the written text of his or her comments, we have summarized the extemporaneous concern below. We have also summarized the unique concerns of individuals who presented comments at the public meetings but for which no written record beyond the meeting transcript exists.

Page No.	Comments/Commenters	Responses
	Riverton, Wyoming - February 26, 1991	
17, 18	The South Pass area is eligible for listing in the National Register of Historic Places (NRHP). The impact of the proposed pipeline would have an adverse effect on the area's eligibility status. (Donn Kesselheim, Wyoming Outdoor Council)	The eligibility of the South Pass "area" for listing in the NRHP has not been determined. Only the South Pass National Historic Landmark is presently listed in the NRHP.
59	This is not a pristine area when viewed from the air. (Tom Satterfield, Fremont County Commission)	We agree.
59	My concern is with the government that is charged with the oversight responsibility of the construction areas.	
60	The ultimate responsibility is with the Federal government to see that a good job is done to restore thee disturbed areas and for the selection of the route. (Tom Satterfield, Fremont County Commission)	Between the mitigation recommended in the FEIS, Altamont's proposed reclamation measures as presented in FEIS Appendix B-5, and the BLM's construction, operation and maintenance stipulations to be developed during its POD process, we believe that a good job will be done to restore all areas disturbed by construction.
73	I would like to see an EIS concerning the Indian artifacts, the Indian sacred spiritual sites and petroglyphs.	
74	What I would ask for is them to have an Indian representative that would walk along with them.	
75	We have considerable interest in spiritual sites, mostly around Shoshone and up into South Pass. I'd like to see an EIS scoping on the whole route, because I know a lot of tribes are concerned about the proposed pipeline. (Harmon Wise, Shoshone Tribe)	Section 106 of the National Historic Preservation Act (NHPA) requires that the proposed route be surveyed for resources eligible for or listed in the NRHP. Indian artifacts, sacred sites and petroglyphs would be included in such surveys. Representatives of interested tribes would be invited to participate in the surveys. Altamont's cultural resources consultant is currently consulting with several tribes.
75	The EIS omits economic impacts.	

Page No.	Comments/Commenters	Responses
77, 78	There is no discussion about economic impacts, nor a realistic assessment of those impacts, to our communities, counties and state. It would be nice to see, although it's not mandated by Congress, an economic impact statement. (Alise Gostin, Wind River Multiple Use Advocates)	Traditional socioeconomic impact parameters were addressed in DEIS chapters 3G and 4G. Additional information has been included relative to county benefits in chapter 4G.
82	I would just like to go on record as opposing consideration of the Jeffrey City Variation. (Jack Corbett, landowner)	We are not recommending adoption of this variation.
87	Every pipeline in the desert is a two-track. There'a going to be an access road into this pipeline every time you cross a creek or a slough. (Jeff Davis)	Altamont states that it would not require an access road or trail along its pipeline for operation or maintenance purposes. The BLM and various other parties have made it quite clear that a two-track along the right-of-way once construction is completed would be unacceptable, and that the entire right-of-way must be restored. Based on our review of USGS topographic maps, aerial photographs, field investigations and data filed by Altamont, we believe that access to the right-of-way would be provided by existing roads and two-tracks.
90, 91	It is essential that we preserve the South Pass area and the four major pioneer trails (the Oregon, Mormon, California and Pony Express) which pass through it. I would encourage that special attention be paid to the Pony Express Trail. (Gene Potter, Wyoming Preservation Officer, OCTA)	Thank you for your comment. The South Pass area was identified early-on as an area requiring specific (as opposed to generic) mitigation. We believe that implementation of the measures included in the FEIS would provide adequate protection for the area. Please see the individual resource discussions in chapter 4, as well as Appendix B-5. Further, we are required by Section 106 of the NHPA to take into account the effect of the proposed action on resources eligible for or listed in the NRHP. Compliance with Section 106 is well under way with the participation of the BLM, the State Historic Preservation Officers, Indian tribes, and other interested parties.

Page No.	Comments/Commenters	Responses
Billings, Montana - February 27, 1991		
7, 8	For the last 60 years, we have been picking up materials that have been discarded by oil and gas operators when they left our property. We are concerned about the ruts left in the soil and the widening of single two-track roads as the ruts got too deep for low-centered vehicles to pass. Right-of-way rehabilitation has been so poor that it wouldn't take much of a scout to follow the pipelines on our lands. (Ed Leuthold, landowner)	Altamont proposes to remove all construction debris and excess rock from the right-of-way at the conclusion of construction. With the exception of the Wild Horse Compressor Station proposed for Hill County, Montana, no new access roads are proposed. Altamont would either repair or reimburse landowners for damages sustained during construction. All areas disturbed by construction would rehabilitated and revegetated to pre-construction conditions. Please see chapter 2 (General Construction, Operation and Maintenance Procedures, and Altamont Project Description), chapters 4B and 4L, and Appendices B-1 and B-3.
9	It is never the same person that negotiates the agreement, installs the facility, and then stays to merging, selling out and moving on, it is almost an impossible task to keep up with the addresses and telephone number of the owner/ installer/operator. (Ed Leuthold, landowner)	Comment noted. Altamont has provided a telephone number in each of the two states which would be crossed by the proposed pipeline. The public may contact Altamont in Montana at (406) 442-8560 and in Wyoming at (307) 634-8891.
9	It would just be a ridiculous idea to run the pipeline through the State of Montana if we were not able to hook on to it. Because the operating pressure would be so high, it seems to me that the pipeline ought to be able to share some of the costs needed to compress Montana gas for injection in to the pipe. (Ed Leuthold, landowner)	This comment correctly identifies that parties wishing to inject gas into the proposed pipeline would be required to overcome the operating pressure at the injection point. As an open-access pipeline, gas entering the proposed system would do so only as a result of contract arrangements between gas purchasers and gas producers.
Bonners Ferry, Idaho - February 26, 1991		
7	Same as written comments submitted by Mrs. Noris Stevens (GI-043)	Same as response to Mrs. Steven's written comments.
9	Mr. Peter Grubb wants to be assured that mitigation for fisheries habitat improvement is done in such a way that boating safety is not jeopardized.	PGT has committed to designing the proposed fishery enhancement structures so that they do not interfere with recreational rafting.
9	Mr. Peter Grubb is concerned what the visual impacts of the cuts through the forests are going to be from the river when a person is floating along.	Please see chapters 3L and 4L for a discussion of Mr. Grubb's concerns.

Page No.	Comments/Commenters	Responses
10	Mr. Peter Gruhb referred to a construction method which used equipment that dug down from the top, loaded the dirt and rock into a truck, put the pipe down, and then refilled that. The technique dented the swath, the land disturbance, from being as great as it otherwise might have been.	Based on the information, it appears that Mr. Gruhh is referring to a rotary wheel ditching machine, which is suitable for use in relatively flat areas where no bedrock is present. A rotary wheel ditching machine cannot be used on Loor 1 due to topographic, geologic, and soil-related constraints.
11	Mr. Grubh wanted to know it the existing PGT easement or franchise allow for more than one pipeline.	The answer depends on the particular easework agreement originally negotiated between PGT and the landowner.
11	Mr. Gruhh wanted to know if the installation of the second pipeline will jeopardize future potential of the Moyie River being included as a wild and scenic river under the National Wild Scenic River Act.	It is staff's understanding that the Moyie River was already studied for potential inclusion as a wild and scenic river and that the study did not recommend its inclusion.
13, 14	Mr. Dave Bodner is concerned that PGT's Fishery Enhancement Plans may be rendered moot on private lands if access to these lands are denied.	See revised chapter 6.
14	Mr. Bodner wants all structures placed in the river to be done in a manner that will not restrict white water rafting or create low-head dams.	See previous response to Mr. Gruhb's similar concern.
14	Mr. Bodner requests that when PGT replants pipeline, they should be required to use naturally occurring species to eliminate visual impact.	Please see chapters 3B, 3L, 4B, 4L, and G for information relating to this concern.
14	This pipeline project has the potential to add the equivalent of many years of silt to the pool behind the Ferry hydroelectric dam.	Implementation of best management practices and the procedures contained in Appendix C-3 would ensure that construction of the PGT project does not significantly increase the naturally occurring siltation problem at the dam. Implementation of PGT's proposed Fishery Enhancement Plan should result in a decrease in the bedland transport of sediments.
15, 16	Ms. Irma Merrifield stated that the pipeline expansion will increase the taxes paid by PGT to the county.	None required.
16	Mr. John Watts expressed support for the project.	None required.
19, 20	Ms. Patricia Nelson, landowner, spoke of her right to have a "say-so" about trees planted on this pipeline and other matters.	Each landowner will have the opportunity to directly discuss restoration on their property with PGT.

Page No.	Comments/Commenters	Responses
22, 23	Same as written comments submitted by Ms. Jan Rose (GI-052).	Same as responses to Ms. Rose's written comments.
27	The Forest Service allows excessive clear cut. Why blame all of it on the pipeline?	Thank you for your comment.
	Bend, Oregon - February 28, 1991	
7	Mr. Tatum would like to see the loop stay in Pine Hollow (where the original line is) rather than running the new line further south up on a ridge.	See chapter 6 of the FEIS.
9, 10	Mr. Dick Maudlin, Chairman of the Deschutes County Commission, expressed support for the project.	None required.
11, 12, 13	Similar issue as Mr. Tatum.	See chapter 6 of the FEIS.
14, 15	Mr. Harley Hafter complained of rocks still on his land as a result of past GPT construction.	Thank you for bringing this issue to our attention. See revised chapters 4B and C.

Late Comments

LATE COMMENTS

Page

LC1 U.S. Department of the Interior LC-1

LC2 Oregon Department of Fish and Wildlife LC-18

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

[U.S. Department of the Interior]

ER 91/60

APR 9 1991

Ms. Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Ms. Cashell:

The Department of the Interior has reviewed the draft environmental impact statement (statement) for Pacific Gas Transmission Company (PGT) and Altamont Gas Natural Gas Pipeline (Altamont) Projects, Idaho, Washington, California, Montana, and Wyoming, and has the following comments.

GENERAL

We are concerned about effects to National Natural Landmarks, Wild and Scenic Rivers, National Trails, Air Quality, Crater Lake National Park, potential impacts to threatened or endangered species, anadromous fish, migratory birds, wetlands and riparian habitats, other fish and wildlife habitats, and other resources under our jurisdiction.

We recommend that loss prevention and mitigation measures should be addressed in greater detail in the final statement. In addition, the draft statement notes that a biological assessment, being prepared to facilitate compliance with the Endangered Species Act of 1973, would incorporate the results of surveys currently underway. The status of several species are incorrectly listed, and should be corrected in the final statement and other future project documents. Because the initial species list used by the Federal Energy Regulatory Commission (FERC) may need updating, we recommend that FERC request new lists from our U.S. Fish and Wildlife Service (Service) to ensure that the biological assessment under preparation appropriately considers all currently listed and proposed species.

National Natural Landmarks

We note that the Route 28 Variation states that this route would skirt the Red Canyon National Natural Landmark (NNL) but not cross the area. While the proposed pipeline would not physically disturb the NNL, it could impact the viewshed.

LC-1 This comment letter was received by the Commission on April 11, 1991, five and one-half weeds beyond the March 4th close of the comment period. No request for an extension of the comment period was made, nor were copies of the comments provided to the environmental project managers or the case docket numbers identified, as specified in the instructions for commenting on the DEIS. Although we have no obligation to respond to comments received beyond the comment period, we have reviewed the comments provided by the Interior Department but are not preparing a written response on a comment-by-comment basis as was done for timely comments. Where changes were warranted in the text of the FEIS, the staff has done so in order to address the particular issue raised in this comment letter. Many of the issues in this comment letter were already raised by other parties and responded to accordingly.

LC-2

Red Canyon was designated an NNL on November 18, 1990. This site is significant for its geologic value as a classic representation in the Wyoming Basin of a hogback and strike valley (cuesta), which exposes an outstanding section of Permo-Triassic red beds and displays the northeast flank of the Wind River Range structure (developed during the Laramide Orogeny). While not the only such area in the Wyoming Basin, this area has the advantage of being highly scenic and is of such size that it can be viewed and interpreted in its entirety from a single observation point along State Highway 28. There is probably no more classic, well developed, or scenic example of cuesta development in the Wyoming Basin Natural Region. For these reasons, we recommend serious consideration of these significant, natural, and scenic qualities in your plan in order to provide for viewshed protection.

Wild and Scenic Rivers

The impacts of the proposed projects on existing and potentially designated Wild and Scenic Rivers are not adequately addressed in the draft statement. The routes cross two designated Wild and Scenic Rivers, one river that has been formally recognized as a candidate for designation by the Secretaries of the Interior and Agriculture, and three rivers on the Nationwide Rivers Inventory. FERC must immediately initiate consultation with the agencies administering these rivers to avoid or mitigate adverse impacts to these significant resources.

a. Designated Rivers

The proposed routes cross two designated Wild and Scenic Rivers: the Missouri River in Montana and John Day River in Oregon.

The Bureau of Land Management should be consulted further on potential crossings either upstream or downstream of the designated segments of these rivers.

b. Secretarial Candidates for Designation

The Altamont route crosses the Yellowstone River in Montana within a segment which has been designated as a potential Wild and Scenic River by the Secretaries of the Interior and Agriculture under section 5(d) of the Wild and Scenic Rivers Act. That section states:

> "The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic, and recreational river areas shall be evaluated in planning reports by all federal agencies as potential alternative uses of the water and related land resources involved."

This section clearly requires that FERC fully consider the Wild and Scenic River potential of the Yellowstone River and the possible consequences of the Altamont pipeline crossing on the significant values of the river.

C. Nationwide Rivers Inventory

There are three rivers on the Nationwide Rivers Inventory crossed by the proposed alignments, the Sweetwater River on the Altamont route and the Crooked and Williamson Rivers on the PGT/PG&E route. The Nationwide Rivers Inventory is a national listing of rivers which are candidates for National Wild and Scenic Rivers status. The inventory is administered by the National Park Service.

Pursuant to a 1979 Presidential Directive, the Council on Environmental Quality (CEQ) has published guidelines which require that all federal agencies:

> Avoid or mitigate adverse effects on Nationwide Inventory Rivers; and Consult with the Heritage Conservation and Recreation Service (now the National Park Service) in developing mitigation or avoidance plans for proposed projects.

Neither of these requirements have been fulfilled. The proposed projects unquestionably have the potential for direct and adverse effects on the significant values of the five rivers referenced above, and it is essential that FERC consult with the National Park Service on appropriate mitigation for these effects.

We do not consider review of the draft statement to be an acceptable substitute for the consultation between FERC and the bureaus of this Department as stated in the Wild and Scenic Rivers Act and related CEQ guidelines. We therefore urge FERC to initiate consultation with the appropriate bureaus on Wild and Scenic River issues and that additional environmental review and licensing actions be delayed until such issues can be satisfactorily resolved. The results of consultation with the National Park Service should be presented in the final statement.

National Trails

The Department supports the modifications to the proposed route for circumventing the historically significant South Pass area in Wyoming. South Pass is perhaps the most important landmark on the entire 2,000 mile Oregon Trail. It is on the National Register of Historic Places and is a National Historic Landmark, in addition to being a site along both the Oregon and Mormon Pioneer National Historic Trails. The proposal, without the South Pass variations, has the potential to impact the Oregon and

Mormon Pioneer National Historic Trails and the proposed California and Pony Express National Historic Trails, all of which pass through South Pass in the same general location. Impacts could occur by degrading the visual quality of the area or by actual physical damage to historic trail rute or swales.

We commend the authors of this document for their analysis (on pages 4M-4 to 4M-7) of impacts and recommended mitigation measures relating to these historic trails. Although most land in the South Pass area is administered by the Bureau of Land Management, our National Park Service, because it has overall administrative responsibility for the Oregon and Mormon Pioneer National Historic Trails, requires more detailed and site-specific project information be provided in the final statement.

The final statement should clearly indicate on maps the location of any national scenic and national historic trails in the vicinity of the proposed pipeline routes.

Air Quality

Maps for the final statement should indicate more distinctly the location of National Park units, National Forests, and other national and state resource units. This is particularly important from an air quality perspective, since the two pipelines would pass close to several class I areas (National Park units and National Forest wildernesses). In fact, nine of the compressor stations (seven along the PGT/PG&E pipeline) are located within 100 kilometers of class I areas. Compressor station 13 (PGT) is 14 kilometers east of Crater Lake National Park, while station 14B is only six kilometers southeast of Lava Beds National Monument.

Second, because the compressor stations can be major sources of air pollution (that is, greater than 100 tons per year of a regulated pollutant), the air quality analysis must be expanded in the final statement. It is insufficient to say that all detailed air quality issues will be dealt within forthcoming Prevention of Significant Deterioration (PSD) permit applications. The information regarding the emissions of various pollutants from the compressor station and their potential adverse impacts on nearby class I areas should have been included in the draft statement and discussed relative to alternative sites.

The one pollutant from operation of compressor stations that is discussed in the draft statement is nitrogen oxides. Several of the new compressor stations are said to potentially violate the PSD increment (concentration) established for nitrogen oxides. However, there is no discussion for application of Best Available Control Technology (BACT) in order to meet the increment and to minimize the impact on class I areas. Nitrogen oxides are precursors to ozone, a pollutant which has adverse impacts on many species of vegetation that can be found in the class I areas near the proposed pipelines. These species include black oak, ponderosa and Jeffrey pines, aspen, and Douglas fir, among others. The data in the draft statement appeared to indicate that at least a few of the compressor stations would generate more than 200 tons per year of nitrogen oxides. Thus, these major sources have the potential of contributing to significant amounts of ozone in many national resource units and exacerbating existing ozone problems in a number of areas (California in particular).

Nitrogen oxide gases in sunlight are also converted to nitrates in air to fine particles which absorb light and thus cause visibility reduction. The Clean Air Act gives the Federal Land Manager (in the Interior Department, the Assistant Secretary for Fish and Wildlife and Parks) and the class I area manager (superintendent) an affirmative responsibility to protect visibility and other air quality related values in class I areas. The Act also established as a national goal the prevention of future visibility impairment and remedying existing visibility impairment in class I areas. The final statement should contain detailed analyses of any existing or potential impacts on visibility in the several class I areas which are located near the proposed pipelines and their compressor stations.

The nitrates can combine with moisture and fall to earth as nitric acid (acid precipitation) or be deposited on vegetation and soils (dry deposition), thereby affecting sensitive aquatic or terrestrial ecosystems. Elemental nitrogen can also be deposited on or in soil and change its composition (act as a fertilizer), changing the growth patterns of various vegetation.

The final statement should contain detailed information on the potential adverse impacts to class I areas from nitrogen oxides emitted from the compressor stations as well as appropriate mitigation measures to limit emissions of these pollutants.

Crater Lake National Park

We are concerned about impacts from development of the pipelines to this class I area under the jurisdiction of our National Park Service. The proposed project would be about 8-1/2 miles from the eastern boundary of Crater Lake National Park. The following issues must be addressed in detail in the final statement.

We have concerns about potential impacts to water quality in the park. Special congressional legislation (P.L. 97-250) was passed in 1982 because of concern for the lake's water quality and clarity. The legislation directed the Secretary of the Interior to protect Crater Lake and take actions to ensure its pristine water quality.

LC-6

Historically, the airshed of Crater Lake National Park has been considered by researchers to be the cleanest in the United States, with the lowest concentration of nitrates. The substantial amounts of nitrogen oxides, approximately 100 tons or more yearly, released by a compressor station could convert to nitrates that, under certain wind conditions, would drift and fallout over Crater Lake. The natural state of the lake is to be nitrogen deficient and biologically unproductive, or oligotrophic. The addition of nitrate would serve as a nutrient in the lake for phytoplankton, causing the populations to bloom, causing a concomitant decrease in water clarity.

We are also concerned about two sensitive species that occur within the park. In a fisheries survey conducted in 1989, a remnant population of Bull Trout (Salvelinus confluentus) was found in a park stream with about 130 individuals. This specie is a Category 2 candidate species under the Endangered Species Act. Changes in water quality from the deposition of converted air pollution constituents could seriously affect this small population since trout are particularly susceptible to minor changes in pH and other water quality parameters.

Pollutant deposition can also impact soils and vegetation. The Oregon Grapefern (Botrychium pumicola) occurs on the Crater Lake caldera and is listed in Oregon as a rare species. Since nitrogen oxide is a precursor to ozone, this plant, as well as other vegetation, could be impacted.

Other impacts to wildlife need to be fully evaluated, especially relative to cumulative impacts from this project and others in the vicinity. For instance, the pipeline project is located in an area known as the "antelope desert", immediately to the east of the park.

Pronghorn Antelope are known to migrate over fifty miles from the Fort Rock winter range to the southwest and into Crater Lake National Park in the area called Desert Creek and Pumice Desert. The FERC should evaluate the impacts to ungulate migration and overall population viability from construction, noise, and other project-related activities of this project, as well as from cumulative project development in the area.

Although not yet designated as wilderness, Crater Lake has been studied and found to be suitable. It is National Park Service policy to treat such areas as wilderness so that suitability is maintained until a legislative process is completed.

Noise from the compressor station may intrude into visitor experience that has included the wilderness attributes of silence and solitude. It is National Park policy to preserve natural quiet and natural sounds associated with the physical and biological resources of the national parks. The levels of noise generated and impact within important points of the park, especially proposed wilderness, must be evaluated in the final statement.

The highest point in the park, Mt. Scott, is 8,900 ASL. Over 3,000 visitors climb to the top every summer to enjoy the vistas and mountain experience. The views from Mt. Scott include a direct line of sight over the entire pipeline project area. Visual intrusion into the national park, therefore, must be evaluated in the final statement.

Crater Lake National Park is one of the few park areas in which Congress has specifically recognized the importance of the area to science and research especially because of its pristine environment (32 Stat. 202). Because of its pristine environment, there has been an intensive effort to collect baseline data at a variety of levels, that has also included work by the international community. The maintenance of this area in a pristine state will help to establish important benchmarks in environmental monitoring, and against which global changes can be assessed. The National Park Service, the State of Oregon, the Nation and the global scientific community benefit from the environmental quality of the park. The final statement should assess any potential impacts to the scientific values of the park, as well as the potential for invalidation or disruption of long-term ecological studies.

Lands Administered by our Bureau of Reclamation

We request the parties involved in construction of the Pacific Gas Transmission Company/Altamont Gas Transmission Company pipelines coordinate with appropriate Bureau of Reclamation (Reclamation) offices when crossing Reclamation-administered lands. Separate crossing agreements, other permits, and additional site-specific environmental evaluation may be required.

For your information, a portion of the Pacific Gas Transmission Company route (in the vicinity of Klamath Falls, Oregon) is located in Reclamation's Mid-Pacific Region, headquartered in Sacramento, California. The major portion of the Altamont pipeline is located within Reclamation's Great Plains Region (Billings, Montana). The southwestern corner of Wyoming is in our Upper Colorado Region (Salt Lake City, Utah).

In regard to cultural resources addressed on page 4M-5, paragraph 1, and page 6-41, items 67 and 68, Reclamation reserves the right to make determinations of eligibility for cultural resource sites on Reclamation lands. This requirement will be listed as a special stipulation on any permits issued by the Bureau of Land Management for this project.

Specific comments on the draft statement are enclosed.

We hope these comments will be helpful to you.

Sincerely,

Jonathan P. Deason
Director
Office of Environmental Affairs

Enclosure

SPECIFIC COMMENTS

Pages 1-17 and 1-18 TABLE 1-4 PERMIT, APPROVAL, AND CONSULTATION REQUIREMENTS FOR THE PGT AND ALTAMONT PROJECTS:

Information about our bureaus should be changed under the agency heading as follows:

U.S. Department of the Interior, Bureau of Land Management
U.S. Department of the Interior, Bureau of Reclamation
U.S. Department of the Interior, Fish and Wildlife Service

For the Bureau of Reclamation, the information listed should be revised. Permit/Authority should be revised to state "Review authority in consultation with the Bureau of Land Management and an applicant." Likewise, the information provided under Agency Action should be revised to state "Review construction, land use, and rehabilitation plans. Provides mitigation measures and stipulations to the Bureau of Land Management to be included in the permit. Conduct onsite inspection prior to construction."

Idaho Portion of the Proposed PGT Pipeline Project

Pages 3F: 1-4. Affected Environment: Fisheries. Fishery resources in Idaho would be affected by proposed construction activities and crossings of the PGT pipeline project. The Moyie River reach (affected by eight pipeline crossings) may support bull trout (*Salvelinus confluentus*), a Federal candidate 2 species, which may occur in the Moyie River. Rearing habitats would be impacted at all stream crossing locations.

Page 4B: 6. Environmental Consequences: Soils. Only certified clean seed should be used for reseeding to assure that non-native invasive species are precluded from seed mixes. We recommend using seed mixes that would enhance or restore wildlife forage.

Page 4: 1-15. Hydrology and Water Quality. The proposed PGT pipeline would involve 16 watercourse crossings in Idaho, 8 of these crossings would cross the Moyie River. The Moyie River and affected tributaries have been classified as Special Resource Waters by the State of Idaho (IDAPA 16.01.2102 1985). These are waters that ". . . possess outstanding recreational qualities . . ." and ". . . protection of the quality of the water is necessary to maintain an existing, but jeopardized beneficial use." We concur with conclusions in the draft statement that "construction along the proposed route would result in significant cumulative impact on water quality of the Moyie River. . ." (page 4C: 13). To minimize the problems associated with long-term erosion in the Moyie River and Bussard Creek and to protect Cocolalla Creek, which as indicated, has been determined to be a critical drainage by our Service, FERC should retain the right to review and comment on the Shoreline

Management Plan for Bonner County prior to construction of the Cocolalla Creek pipeline crossing. FERC should evaluate and implement an alternative alignment of the pipeline to avoid unnecessary stream crossings. All fills below ordinary high water mark or in wetlands require a Section 404 Clean Water Act permit. Separate evaluation and review of the permit by the Service pursuant to the Fish and Wildlife Coordination Act (Act) will be performed. In the event that an alternative alignment is determined unfeasible, specific procedures to ensure that disturbed areas are maintained and monitored shall be implemented. Stream and Wetland Construction and Mitigation Procedures, contained in Appendix C-3 and outlined in Chapter 6, should be the minimal required condition of construction and pipeline operation.

Pages 4E: 1-15. Impacts and Mitigation Measures Specific to the PGT Project: The proposed natural regeneration of forest lands should be supplemented with seedling planting which, as acknowledged by FERC (page 4E-5), would reduce regeneration time. The PGT should report plant species survey findings to the Idaho Natural Heritage Program, as well as to the U.S. Forest Service, and FERC should enforce a monitoring and replanting program pertaining to wetland regeneration. As problems occur, FERC should review and consult with the commenting agencies for plans to alleviate issues and concerns.

Pages 4F: 1-6. Environmental Consequences: Fisheries. The Service's concerns for the fishery resources in the Moyie River and nearby streams from pipeline activity include: 1) the erosion potential to degrade spawning substrates and habitats; 2) loss of instream and shoreline cover important to rearing and adult trout; 3) acoustic shock and physical injury to fish due to the blasting of bedrock; and 4) the potential for direct spills during and after pipeline construction.

In order to control and minimize the impacts of sedimentation on spawning habitats and fishery resources in Idaho, alternative alignments of the pipeline to avoid construction of unnecessary stream crossings should be evaluated (see previous recommendations in Hydrology and Water Quality section above). If construction at stream crossings would proceed on the Moyie River and adjacent streams, activities should be limited to the low flow period between June 1 and September 30, or to restricted time periods as determined by Idaho Department of Fish and Game personnel based upon specific stream and affected fish species conditions. Our Service will provide further, site-specific comments to the Corps of Engineers, pursuant to the Clean Water Act.

Revegetation of shoreline areas with native plant species is recommended to mitigate shoreline losses from construction activities. The use of large rip-rap to stabilize banks would be the least preferred alternative and should be avoided. Rip-rap would reduce the diversity of shoreline cover and habitats. Disturbance and loss of instream cover should be avoided. Displacement of boulders and large woody debris would require in-kind replacement in nearby reaches that exhibit similar flow and hydraulic conditions.

Fish that reside in the vicinity of stream crossings where bedrock may be blasted would need additional protective measures to prevent mortality from acoustic shock. We recommend that an effective mortality radius or zone be established at each blasting location and that all fish be removed manually from this zone prior to detonation. Methods for documenting fish mortality from blasting and mitigation measures should be conditions of performance prior to project certification.

Our Service concurs with the recommended Spill Prevention, Containment, and Control Plan (Spill Plan) which would prevent toxic spills and provide for the immediate response and cleanup of accidental leaks and spills. The Spill Plan should be a required condition of performance.

Appendix C-3: Stream and Wetland Construction and Mitigation Procedures: In general, the measures outlined in the Stream and Wetland Construction and Mitigation Procedures should provide protection for streams and wetland areas impacted by the PGT pipeline project. After reviewing the proposed procedures, the following minor changes and additions which are listed in Table 1. of the Appendix are recommended.

FERC's recommended mitigation measures should be included as 'specific conditions' prior to any issuance of certificates for construction and/or operation of the proposed pipelines. Specific condition mitigation measures should include measures: 1-18, 25, 26, 33, and 41 (Chapter 6: Conclusions and Recommendations).

California Portion of the PGT Pipeline Project

The California portion of the PGT pipeline consists of constructing an additional 36-inch-diameter pipeline adjacent to the existing PGT natural gas pipeline, extending for 415 miles from the Oregon State border near Malin to Panoche Station in the San Joaquin valley.

Fishery Resources: On streams where anadromous fish, including chinook salmon, steelhead trout, and American shad, and resident sport fish are at or downstream from proposed project activities, site-specific measures should be taken to avoid any habitat disturbance. This is especially critical during life stages such as spawning, egg incubation, and early juvenile rearing. These measures include procedures and precautions to prevent unfavorable water turbidity or entry of sediments, toxic materials, or other contaminants into the stream channel. Waterways which may be impacted and are of particular concern are listed in Table 2 of the Appendix.

Many of the stream crossings may involve impacts on resident and introduced game and non-game fish. Site specific comprehensive erosion control measures should be included to avoid loss of riparian vegetation and stream sedimentation.

Wetlands and Migratory Waterfowl Habitat: The impacts, if any, of project construction and operation on wetlands and migratory waterfowl should be evaluated. Mitigation plans for adverse project impacts on wetlands and waterfowl resting, feeding, and nesting habitat should be developed. In general, these habitats are of high value and are becoming scarce throughout the State. Our Service's mitigation goal is to ensure that no net loss of in-kind habitat value would occur.

Other Wildlife Habitat: Wildlife habitat lost as a result of ground-disturbing activities should also be quantified. As the Service's mitigation goal is to ensure no net loss of habitat value while minimizing loss of in-kind habitat value, appropriate compensation measures should be proposed for loss of wildlife habitat. A revegetation and maintenance plan should be developed and presented in the final statement that evaluates the potential of planting species favorable for wildlife cover and food, and managing the pipeline right-of-way lands to improve wildlife values (such as maintaining vegetative cover and limiting herbicide spraying and vehicular access).

Page 2-22: Our Service concurs with the PGT preferred route, Alternative C, which would avoid the Jepson Prairie Preserve property.

Page 2-38 Table 2-1: Tehama-Colusa Creek should be changed to Tehama-Colusa Canal. We concur with the aerial crossing proposed for Battle Creek. This measure would protect the most important salmon spawning tributary to the upper Sacramento River. Specific provisions for crossing the Coleman Canal should be included because the canal is a primary water supply conduit to the Service's Coleman National Fish Hatchery.

Page 3E-16 Table 3E-3: Because the vernal pool fairy shrimp (*Branchinecta lynchi*), California linderiella (*Linderiella occidentalis*), Conservancy fairy shrimp (*Branchinecta conservation*), and longhorn fairy shrimp (*Branchinecta longiantenna*) are recommended by the Service for Category 1 candidate status, they should be added to Table 3E-3. They should also be included in surveys being conducted for preparation of the biological assessment.

Page 4F-7 California - PGT Nonjurisdictional Facilities Shasta crayfish: The notation that Shasta crayfish are only associated with rubble substrate is not accurate. Shasta crayfish, which have been found in the vicinity of the proposed Fall River crossing, are now known to inhabit soft bottom, vegetated aquatic areas on at least temporary or seasonal basis. This species population continues to decline and the current recovery potential is low. Since PGT is planning to continue surveys in the area, the final statement should include this correction.

Page 4F-8, Winter-run Chinook Salmon: This species is no longer emergency-listed under the Federal Endangered Species Act. The winter-run salmon was formally listed as threatened effective November 30, 1990 (50 CFR Part 227, Federal Register Vol. 55, No. 214, November 5, 1990).

The crossing with the most potential impact on the Sacramento River is located just downstream from the Red Bluff Diversion Dam. This site is in a major migration corridor and provides spawning and rearing habitat for anadromous fish, including chinook salmon, steelhead trout, and American shad. As the federally listed (threatened) and State listed (endangered), winter-run salmon also occur at this site, we recommend consultation with the National Marine Fisheries Service and the California Department of Fish and Game regarding potential impacts and loss-avoidance measures. Although most winter-run salmon spawn upstream from the proposed pipeline crossing, construction work may adversely disrupt migratory and juvenile rearing conditions. During periods when the Red Bluff Diversion Dam gates are closed and Sacramento River flows are high, winter-run salmon may spawn downstream from the dam in the vicinity of the proposed crossing. Therefore, the proper time period for in-river construction work must be identified, approved and presented in the final statement.

A significant proportion of the winter chinook salmon run may be expected to pass the proposed construction site during the month of April. Major river channel work at that time may disrupt their migration pattern and may force many salmon to spawn downstream where water temperatures may be lethal to incubating salmon eggs. In addition, very large numbers of fall-run chinook salmon may pass the project site in October when river channel work would have effects similar to those described above. Accordingly, in-river construction work should be confined to the May 1 to October 1 period.

Page E-1-3 & 4 Appendix E-1. Special Status Plants That May Occur Along the PGT Route: The California jewelflower (*Caulanthus californicus*) and San Joaquin wooly-threads (*Lembertia congdonii*) were federally listed as endangered on July 19, 1990. The Hoover's wooly-star (*Eriastrum hooveri*) was listed as threatened on this date. Because some time has elapsed since

FERC's initial request for a species list, we recommend that FERC request an update to that list to ensure appropriate consideration of listed and proposed species in the biological assessment under preparation.

Wyoming Portion of Altamont Pipeline Project

Altamont proposes to locate, construct, and operate a 30 inch diameter pipeline from Wild Horse, Alberta, Canada through Montana to Opal, Wyoming. The proposed pipeline would deliver 700MMcf/d of natural gas to facilities operated by Kern River Gas Transmission Company which already has a FERC certificate to construct and operate a pipeline to southern California.

NONGAME BIRDS

Pages 4E-62 and 6-31: FERC requires the permit applicants to conduct raptor surveys prior to construction, realign the route to avoid destruction of active nests, and not construct within 0.5 miles of an active raptor nest during the raptors breeding and nesting season. Taking of any nests, including inactive nests, is illegal without a Federal permit. Because the small scale of the maps prevent the Service from identifying potential conflicts with known raptor nests, large scale maps should be included in the final statement.

Page 4E-62 and Tables 3E-5 and 4E-11: Some errors in the discussion section and the list of threatened and endangered candidate species were found which need to be corrected as follows:

a) The long-billed curlew needs to be included. It is a candidate species and a Priority Species in need of special management. Curlews nest throughout Wyoming, but the Altamont route does not pass through any known concentrations.

b) The ferruginous hawk is also a species of concern in Wyoming (Nongame Bird and Mammal Strategic Plan).

c) The whooping crane, which summers in Wyoming, is not found on any sites along the proposed route. However, they occur regularly in migration along the route at Farson and occasionally along the Ham's Fork near Opal.

d) There was an active bald eagle nest in 1990 near the pipeline route where it passes the north end of Seedskadee National Wildlife Refuge. This pair may return and nest in the same location or nearby. Seedskadee National Wildlife Refuge personnel and the Service's Cheyenne Field Station should be contacted prior to construction regarding this nesting site.

e) Mountain plovers nest throughout Wyoming and not just in southern Wyoming.

f) The reference made to a 1977 Wyoming Department of Game and Fish publication is presumably the "Current Status and Inventory of Wildlife in Wyoming". This publication is outdated and has been replaced by the Nongame Bird and Mammal Strategic Plan (1987) as the appropriate source for a list of species of concern. Additional bird species which may occur along the pipeline route include the white pelican, black-crowned night-heron, snowy egret, trumpeter swan, merlin, and great blue heron. The Service may have conducted raptor surveys where the pipeline may cross crucial nesting habitat for the merlin. No trees with magpie nests should be cut along the Green River, and tree-cutting should be avoided as much as possible. The restrictions for raptors should also be applied for great blue herons. The only known colony near the pipeline route is in the NESE Sec. 25, T21N R114W.

g) The peregrine falcon is not a winter migrant but do migrate through the state in the spring and fall.

NONGAME MAMMALS

Page 3E-30 and 31: The list of threatened and endangered species for Wyoming should include the spotted bat.

Page 4E-53 through 61: For completeness, these sections should include the spotted bat and Preble's shrew (Federal). The table should be revised to list Wyoming Game and Fish Department Priority Species which may be impacted. In addition to the spotted bat, these include dwarf shrew, Merriam's shrew, Yuma Myotis, California myotis, red bat, hoary bat, Townsend's big-eared bat, pallid bat, and Great Basin pocket mouse. The 1977 Game and Fish Department publication entitled *Current Status and Inventory of Wildlife in Wyoming* is outdated and not suitable for reference in relation to the status and distribution of nongame mammals in Wyoming. The 1987 Nongame Bird and Mammal Strategic Plan and the 1981 Wyoming Mammal Atlas (draft) are the appropriate current sources. We request that the Service and the Wyoming Game and Fish Department be provided with maps (1:24,000 or 1:100,000 scale) of prairie dog town locations identified on this project.

Appendix

Table 1. Minor changes and additions recommended for protecting streams and wetland areas in Northern Idaho.

1. Perennial Stream Crossings

C. Time Window for Construction

The June 1 through September 30 time window should provide adequate protection for spawning fish and incubating eggs in most instances, though there may be species-specific spawning periods unique to a geographic locality. The following language should be included:

3. Notify the appropriate agency, prior to construction, for review to document stream specific timing and presence of spawning fish and incubating eggs. Documentation will be provided that delineates these timings and that project construction will not affect these resources.

H. Post Project Water Quality Monitoring (new measure).

" 1. A systematic, periodic program to monitor water quality downstream of impacted crossings will be implemented concurrent with construction. Changes in sedimentation, turbidity, and cobble armor shall be monitored for a period of 3 years and monitoring reports shall be provided annually to regulating agencies. If these reports indicate possible problems, consultation with the U.S. Fish and Wildlife Service will be initiated and efforts will be made to mitigate for these added impacts."

Table 2. Potentially impact waterways of particular concern to the Service include:

Loop No.	Waterway	Special concerns
8	Fall River	Resident trout
	Lake Britton	Warm water sport fish; non-game forage fish for bald eagles; resident trout downstream from Pit 3 Dam (Lake Britton).
	Old Cow Creek	Steelhead trout

	South Cow Creek	Steelhead trout
	North & South Fork	Steelhead trout
	Bear Creek	
	Battle Creek	Chinook salmon, steelhead trout, resident rainbow trout,
		Coleman National Fish Hatchery water supply
9	Paynes Creek	Chinook salmon, steelhead trout
	Sacramento River	Chinook Salmon (especially the listed winter-run), steelhead trout, American shad.
	Tehama-Colusa Canal	Tehama-Colusa Fish Facility salmon spawning channels.
	Thomes Creek	Occasional salmon, steelhead
	Stony Creek	Occasional salmon, steelhead and warm water sport fish (catfish, bass)
10	Cache Creek	Same as above
	Putah Creek	Same as above
11	Lower Sacramento San Joaquin River Delta Anadromous	fish habitats (striped bass, American shad, Chinook salmon).

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[Oregon Department of Fish and Wildlife]

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Oregon
DEPARTMENT OF
FISH AND
WILDLIFE

March 14, 1991

Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RE: PGT/PG&E Natural Gas Pipeline Project DEIS

Dear Ms. Lois Cashell:

Thank you for the opportunity to review the Draft Environmental Impact Statement for the PGT/PG&E and Altamont Natural Gas Pipeline Projects. Our district fish and wildlife biologists and myself have been in contact with biologists from PGT over the last several years. Some of our comments below reflect previous conversations with PGT staff.

Specific Comments

We are concerned that there are discrepancies between the construction schedule described in the DEIS and the schedule described by PGT biologists. This concern is reflected in comments 2, 9 10, and 11 below.

1. Page 1-20. The agency name needs to be changed to Oregon Department of Fish and Wildlife, not Oregon Game Commission.

2. Page 2-40, Table 2-B. The DEIS indicates that the construction phase will occur in the Bend area between April and October 1993. PGT biologists however, have indicated that work would occur in the area possibly as early as late February/early March. The pipe would be laid during early June and all ground work would be finished by mid-August. Because of this schedule, the Department was concerned that there would be an open trench lying in the path of antelope dispersing from their wintering areas. As a result, our biologists recommended that the same mitigation measures developed for minimizing wildlife impacts in the Bend area be used in the Prineville district (see comment 9).

LC-2 Please see response to comment LC-1.

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If work does not begin until April as stated in the DEIS, antelope migration would be less of a concern for the Department.

3. Page 3E-14. It is unlikely that California wolverine are found along the pipeline in Deschutes County as it is too well developed.

4. Page 3E-19. The O'Neil to Bend Airport section of the pipeline is not deer winter range, but year-round range.

5. Page 3E-20. The comment (several narrow corridors) designation for deer migration is not correct. Deer migrate along the entire pipeline route from Lava Butte to Gilchrist, however, within this migration corridor several areas are used more than others.

6. Page 4E-7. The vegetative clearing of the right-of-way will encourage vehicular uses along the corridor. We support any method to reduce the unauthorized uses by ORVs etc. These uses cause harassment, illegal kills, etc., to wildlife.

7. Page 4E-33. The DEIS states that known and potential bat habitat will be surveyed by PGT using a qualified bat biologist prior to construction. The document does not specify what measures will be taken if bats are discovered. The Department would prefer that the alignment be re-routed if bats are found.

There is no recommended construction timing for Townsend's Bats in the DEIS. The Department requests that construction adjacent to bat habitat avoid the hibernating and nesting seasons. The best time for construction would be between the hibernation and nesting seasons or just after the nesting season. The nesting period is between May and September 7. Hibernation should be complete by early April.

8. Page 4E-36. The DEIS states that construction of the John Day Variation on the ridge above Thirtymile Creek would have less than significant effects on California Bighorn Sheep because the loss of vegetation would be short-term and the amount of forage lost would be small relative to the total available forage in the area. However, the Department has serious concerns relative to effects of the John Day variation route. As the DEIS indicates, the Department released bighorn sheep in this location in January of 1989. In both

LC-20

March and June, the Department found one of the two groups of sheep in the area proposed for the new alignment. The area is used for lambing by the bighorn sheep. The Department at a minimum supports the recommendation in the DEIS to avoid construction in the area during the bighorn sheep lambing season.

9. Page 4E-41, last paragraph. Communication between PGT biologists and our district biologists has indicated that construction will occur during the deer migration period. Attached is a copy of the PGT-PG&E Proposed Construction Work Plan Deer Migration Corridors. The only agreed-upon change to this work plan is to allow an earlier daily start-up time for workers. In addition, if the earthen-covered plugs are too far apart they may have to be placed closer than the 400 yards indicated in the DEIS.

10. Page 4E-43. We support the FERC recommendation that no construction occur in the pronghorn migration corridors between March and April to minimize impacts. However, PGT has indicated that construction would be starting earlier than these dates.

11.Page 6-33, #31. We support the FERC recommendation that no construction shall occur within the Rimrock Springs WMA pronghorn migration corridor during the pronghorn migration season. However again, this timing conflicts with PGT's projected timing. If construction does occur during the migration period, the mitigation measures outlined for minimizing migration impacts in the Bend district will need to be a requirement for construction to proceed.

12. Page E-2-3. Paulina Creek near Milepost 480 is not mentioned in Appendix E-2.

13. Map Notebook, Map 10 of 21. Milepost 458 to 465 is Mule Deer Winter Range rather than Transition Range.

14. Sensitive Species. As a final note, the FEIS should address the state of Oregon's sensitive species list (attached) in addition to Natural Heritage data.

Thank you for the opportunity to comment on the proposal. Please feel free to contact me if you have any questions regarding our comments.

Sincerely,

Patricia Snow

Patricia Snow
Waterway Alterations Coordinator
Habitat Conservation Division

Attachments

c Bob Krain, DDFW
Steve Roberts, PGT
Errol Claira, ODFW
Jlll Zarnowltz, OOFW
Jim Phelps, Oon Wllt; OOFW
Ralph Opp, John Fortuna; OOFW
Jlm Torland, Stava Prlbyl, OOFW
Greg Concannon, Amy Stuart; ODFW
Norm Behrens, Ted Fias, Chrie Carey; DDFW